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Family environments of parenting and nonpregnant/nonparenting teens

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by

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GENERAL INTRODUCTION

Although the consequences of teen pregnancy are well documented (e.g., educational, occupational, and marital risks to teen mothers), research interests have turned to examining the factors that contribute to early childbearing. The teen's family environment, social network, and personality are among factors that appear to interact to influence whether a teen will: 1) take risks with her future by becoming sexually active and 2) decide to use contraceptives. Research has been conducted to determine those characteristics common to families whose teens become pregnant (Elkes & Crocitto, 1987; Geber & Resnick, 1988; Landy, Schubert, Cleland, Clark, & Montgomery, 1983; Moore & Hofferth, 1980; Polit, Kahn, Murray, & Smith, 1982; Romig & Thompson, 1988). The above studies have addressed issues such as family configuration and relationships, substance abuse, physical abuse, and background characteristics of pregnant teens; however, the studies are limited in number. Especially needed are studies comparing those teens who decide to deliver their babies with control groups who are not pregnant (Ulvedal & Feeg, 1983). The present study compared the family environments of teens who are parenting with those who are nonpregnant/nonparenting.

Ulvedal and Feeg (1983) found several characteristics common to families with pregnant teens; these included the absence of a biological father, alcohol abuse, and a mother

and sisters who also were pregnant as teenagers. They found that the male figure in the home, whether it was the biological father, stepfather, or mother's boyfriend, had a fair or poor rather than a good relationship with the pregnant teen. The male figure was more apt to be an alcohol abuser; the teen also tended to choose a boyfriend who abused alcohol and drugs. The relationship with the mother was described as good rather than fair or poor and seemed to improve with the teen's pregnancy.

Oz and Fine's study (1988) supported Ulvedal and Feeg's (1983) results. They found that having an alcoholic or violent father, having a brother who had spent time in jail, having been sexually abused, or having been placed in foster care were factors contributing to early childbearing. Furthermore, teen mothers had experienced more incidents of sexual abuse, usually with several family members. In contrast, teen nonmothers who were sexually abused experienced only a one-time occurrence and usually with a stranger. The authors suggested that the teen mothers wanted to escape their unhappy childhoods and powerlessness and enter adulthood.

In a study of case reports, Elkes and Crocitto (1987) found several common themes in the family backgrounds of pregnant teens. The common characteristics were as follows: nonintact families; lack of trust in family members; strained relationships with parents, especially dominant, male "father

figures;" teens who abused drugs and alcohol; and at least one parent who was a substance abuser. Because emotional and physical abuse in the family were common, physical discipline was considered an acceptable mode of punishment. The girls also were attracted to physically abusive boyfriends and considered such behavior acceptable.

Moore and Hofferth (1980) concluded that the family of origin seemed to have a strong impact on the age when a female began childrearing. The authors found that an intact family was positively related to teen's educational attainment and age of family formation. Further, they found that a direct effect of having an intact family was that the parents had a greater ability and interest in supervising and controlling their teens. The presence of the father in the home seemed to delay sexual activity in teen daughters.

The family of the pregnant teenager is usually characterized by a close, symbiotic, and overdependent relationship with the mother, combined with a distant or absent relationship with the father (Landy et al., 1983). These authors found that the pregnant teenager is likely to come from a broken home, to have experienced unstable family relationships, and sometimes to have been abandoned by at least one parent. Landy et al. (1983) concluded that the teens in their study seemed motivated to get pregnant; they

had wishes to reconstruct their own experiences with their mother through their relationships with an infant.

Ralph, Lochman, and Thomas (1984) compared family histories and teen's psychosocial adjustment of 19 pregnant and 20 nonpregnant black teens. They found that pregnant teens were more likely to have mothers with less education, more brothers, better family adjustment, later sex education, and less well-defined and optimistic vocational-educational goals than the nonpregnant teens. Ralph et al. (1984) suggested that pregnant and nonpregnant teens do have distinct characteristics that differentiate them; yet these characteristics do not indicate family or psychological disturbance in pregnant teens.

Gottschalk, Titchener, Piker, and Stewart (1964) compared pregnant and nonpregnant teens matched on socioeconomic and cultural background, neighborhood, and education. They found that pregnant teens reached sexual maturation earlier, had less parental supervision and discipline, and were less apt to claim a religious preference or attend church.

Although research on family characteristics of pregnant/parenting teens is beginning to emerge, few studies compare pregnant/parenting teens with nonpregnant/ nonparenting teens. This study was designed to compare the family environments of teens who are parenting with those who are nonpregnant/nonparenting. Comparisons of the two groups

were done using t-tests; regression analysis was used to predict the factors that contribute to whether a teen becomes pregnant. Self esteem and IQ, often times impacted by family environments, may influence the motivational level and level of functioning of teens; therefore, this study also compared the self esteem and verbal ability of the two groups of teens. The specific objectives of the study were:

1) To compare parenting and nonpregnant/nonparenting teens on family dynamics (i.e., Togetherness and Dysfunction) and family environment dimensions (i.e., Cohesion, Independence, Conflict, Expressiveness, Achievement Orientation, Intellectual-Cultural Orientation, Moral-Religious Emphasis, Organization, Control, Active-Recreational Orientation) in the teens' families of origin.
2) To compare parenting and nonpregnant/nonparenting teens on background variables, such as age, socioeconomic status of family of origin, education level of teen and parents, and marital status of teens and parents.
3) To compare parenting and nonpregnant/nonparenting teens on self esteem and verbal ability.

Explanation of Thesis Format

This thesis is composed of two papers suitable for publication: a review of literature concerning family

environments, self concept, and school achievement of pregnant/parenting and nonpregnant/nonparenting teens (Paper 1); and a study comparing characteristics of parenting and nonpregnant/nonparenting teens (Paper 2). The papers are followed by a General Summary and Appendices containing statistical tables, category definitions and examples of open-ended interview responses, the coding map for data, and the questionnaires. Tables for Paper 2 are contained in Appendix A. References cited in the General Introduction follow the General Summary.

PAPER 1: FAMILY ENVIRONMENTS, SELF CONCEPT, AND SCHOOL ACHIEVEMENT OF PREGNANT/PARENTING AND NONPREGNANT/NONPARENTING TEENS: A LITERATURE REVIEW

INTRODUCTION

Government officials, educators, researchers, and families agree that teen pregnancy is a major social problem; teen childbearing carries financial burdens for the teen, her family, and society as a whole. With one million teen girls becoming pregnant every year in the United States and over half of them choosing to give birth, there is no question that a remedy to the problem must be found (Hayes, 1987). Concerns arise about early childbearing due to potential educational, occupational, and marital risks to the teen mother. The child also is at risk for having social, emotional, and cognitive deficits.

Past efforts to implement sex education in our schools and teach abstinence or contraceptive use have not been very effective. Therefore, researchers have taken a different approach to the problem. The factors which may predispose a teen to early pregnancy have been studied in an effort to help families and educators target those teens who possess certain at-risk characteristics (Elkes & Crocitto, 1987; Geber & Resnick, 1988; Landy, Schubert, Cleland, Clark, & Montgomery, 1983; Moore & Hoffert, 1980; Polit, Kahn, Murray, & Smith, 1982; Romig & Thompson, 1988). Several predisposing factors have been identified from research studies; these include nonintact families, poor or strained family relationships, substance use, physical and sexual abuse, intergenerational

teen pregnancies, large family size, and poor educational and career goals (Elkes & Crocitto, 1987; Oz & Fine, 1988; Ralph, Lochman, & Thomas, 1984; Ulvedal & Feeg, 1983). Studies comparing these characteristics for teen mothers and nonmothers are needed (Ulvedal & Feeg, 1983).

This review of the literature is concerned with family characteristics, self concept, and school achievement for parenting and nonpregnant/nonparenting teens.

THEORETICAL FRAMEWORK

Developmentalists and family therapists each regard the family as a primary focus for understanding human behavior. They agree that the individual needs to be studied in the context of a larger system -- the family. Differences in levels of adaptability, self-regulation, and subsystem boundaries are factors contributing to whether the family will be normal or dysfunctional (Fox, 1981; Minuchin, 1985). Family systems theorists attribute teen pregnancy to deficits in these areas and/or to the inability of the family to use their resources effectively (Fox, 1981).

Systems theory consists of the following six basic components: 1) any system is an organized whole and elements within the system are necessarily interdependent; 2) patterns in a system are circular rather than linear; 3) systems have homeostatic features that maintain the stability of their patterns; 4) evolution and change are inherent in open systems; 5) complex systems are composed of subsystems; and 6) the subsystems within a larger system are separated by boundaries that are governed by implicit rules and patterns.

When the system being considered is the family unit, there are three facets of family life that interact to determine the level of family functioning (Fox, 1981). First, various sociocultural and economic characteristics of families

(e.g., racial background and parents' educational and income level) have the potential to affect the attitudes, expectations, values, and behaviors of teens. Second, each family member has established patterns of relating to other members. Third, the quality of affective relationships among family members is important when studying family functioning.

Self-regulation and subsystem boundaries within families need careful evaluation when examining the differences between normal and dysfunctional families. Each of the following subsystem boundaries needs to be examined to determine the level of functioning in the family: spousal, parental, and sibling. Firm, but adaptable subsystem boundaries are stressed as important factors in establishing a functional family; the boundaries and rules of interaction must change over time as development occurs. In dysfunctional families, subsystem boundaries and their adaptation often times are problematic (Minuchin, 1985).

Patterns that are developed and maintained in the family over time regulate the behavior of the family members (Minuchin, 1985). Fox (1981) describes these patterns as authoritarian versus permissive, structured versus disorganized, or rigid versus permissive. Minuchin (1985) states that in normal families, when a family member disturbs the homeostasis, the other members adapt to bring equilibrium back into the system; in other words, self-regulation in

individual family members occurs as a normal function to keep the family functioning at an optimal level. Yet in dysfunctional families, the process of self-regulation may include maladaptive behavior as a necessary aspect of retaining the dysfunctional system.

Fox (1981) suggests that developmental changes in any one family member will cause a needed increase in the normal social resources. The resources are needed to compensate for the change and to readjust the relationships among the interdependent members. Teens have several developmental tasks; each task requires a certain level of achievement before progressing to the next task. These tasks are the development of autonomy and separation, the establishment of one's identity, the establishment of appropriate attachments to people not in their family, and self mastery. At the same time the teen is accomplishing these developmental tasks, the teen's parents may be working through some developmental changes themselves (e.g., retirement or death of a parent). Fox (1981) further suggests that when two or more family members are going through a developmental change at the same time, adjustment problems greatly increase. The outcome of these simultaneous changes will depend on the family's resources and their effectiveness in using them. Fox (1981) states that some families lack the resources to manage the structural problems that occur when simultaneous development

occurs; teen pregnancy may be a symptom of resource deficits. The family system deficit theory hypothesizes that teens have babies to: 1) have someone to love or to compensate for their family's lack of attention toward them; or 2) establish their own independence and force a renegotiation of their relationship with their parents (Fox, 1981). In conclusion, Fox (1981) suggests that if the teen's developmental needs are not being effectively met by the family's social resources, then she may seek to meet her needs through a pregnancy.

FAMILY CHARACTERISTICS

Research studies have indicated that differences exist in the family environments and background characteristics of pregnant/parenting and nonpregnant/nonparenting teens. Mueller and Cooper (1986) studied young adults who grew up in single-parent families in comparison to those from two-parent families. Differences between the two groups of young adults included: educational, occupational, and economic attainment; family formation; marital stability; and timing of parenthood.

Those from single-parent families had lower educational, occupational, and economic attainment; yet, some of these differences were due to the economic disadvantage of the single-parent family. When the economic conditions of the subjects' families of origin were controlled, the subjects from single-parent families still tended to have lower economic attainment or poorer economic circumstances in their own adulthood (i.e., lower family incomes, greater likelihood of receiving welfare assistance or going without material necessities, and fewer owning their homes). Those from single-parent family backgrounds were more likely to have their first child at a younger age (single-parent family, $\underline{M}$ = 20.4; two-parent family, $\underline{M}$ = 22.8) and to be separated (i.e., not living together) or divorced rather than married. Furthermore, those from single-parent families (20%) were more

likely to have a baby out-of-wedlock than those from two-parent families (4%). The authors concluded that factors other than economic disadvantage must contribute to the observed differences between groups. The authors suggested that the presence of a second parent might be advantageous to a child because of the guidance and modeling. Furthermore, they found that the reason for the absence of the second parent was critical. When comparing subjects from single-parent families caused by divorce versus those caused by a death of one parent, subjects reared in the divorced family had a higher incidence of being an unwed parent (24% versus 8%); a majority (65%) of those who had a child out-of-wedlock were teens at the time of the birth.

Kearns and Crockett (1989) studied the relationship between family structure, "normative" factors (i.e., mother's age at birth of first child, whether there was a sister who became pregnant as a teen, and maternal educational status) and teen girl's sexual experience. They examined whether the girl's domestic plans (i.e., expected age to marry and have first child), career aspirations, and/or the quality of family relationships mediated the relationship mentioned above. They found that the teen's age, family structure and normative factors were directly related to the girl's sexual activity. Yet, this relationship is partially mediated by the teen's career plans and the quality of family relationships, as

measured by self-report questionnaires. However, domestic plans did not appear to be a significant mediator of the relationship. Kearns and Crockett (1989) also found that better family relations appeared to reduce the probability that a girl would engage in early sexual activity. They suggested that the factors which contribute to high career aspirations should be examined since girls with high aspirations are less likely to engage in early sexual activity, regardless of normative family influences.

Other variables have been associated with early sexual behavior. Abernethy and Abernethy (1974) studied the attitudes and family experiences associated with precocious sexual behavior. In the 1974 study, they compared the interviews of mentally ill teens to an earlier study (Abernethy, 1973) comparing mentally stable women who had abortions with nonpregnant women who appeared to be effective users of contraception. In the 1974 study, characteristics of those teens identified as high-risk for unwanted pregnancy included feelings of alienation from any supportive maternal figure, warm feelings towards their fathers, and a high incidence of father-daughter incest. Furthermore, they described their parents' marriages as "fair" or "bad." In the 1973 study, the subjects who had experienced an abortion also stated that they experienced alienation from their mother during adolescence while having an intimate relationship with

their father which often excluded the mother. Thus, the results of the study on the mentally ill (Abernethy & Abernethy, 1974) strongly resembled those found in the study of mentally stable women who had had abortions at some point in their life (Abernethy, 1973).

Levels of communication, adaptability, cohesion, and autonomy in the family may affect a teen's involvement in, competence in, and certainty about decision making. Brown and Mann (1990) examined the relative importance of a set of family structural and process variables on the teen's participation in family decisions. They found that one-parent families, especially those headed by mothers, were associated with greater teen participation in family decisions. While parent-child communication was not related to the teen's participation in family decisions, family adaptability was related to teens' participation in family decisions. Furthermore, the authors found that family cohesion and parent-child communication were associated significantly with competent decision making in teens; however, competence was not associated with the number of parents in the home. Brown and Mann (1990) also found that girls participated in more family decisions, while boys were more competent in decision making. Teen girls appear not to be very confident about their decisions and therefore let other people, such as peer groups, influence their decisions (Brown & Mann, 1990). Thus

it appears that important decisions, such as whether or not to participate in sexual activity, are more easily influenced by family structure and other factors (e.g., peer groups) for teen girls than for teen boys.

Warren and Johnson (1989) examined the relationships among family environment, background variables, and the certainty with which pregnant teens made decisions concerning their postdelivery plans. The authors interviewed teens who were unintentionally pregnant and not married. In addition to measuring several background variables, they administered the Moos Family Environment Scale and Multiple Affect Adjective Check List to examine the subjects' family environments, anxiety, hostility, and depression.

Warren and Johnson (1989) found that ambivalence over postdelivery plans were related to being white and living with either both natural parents or with mother only, versus living with father only or alone. They suggested that living with both natural parents or mother only is associated with the lack of autonomy, as measured by the Family Environment Scale, which increases the ambivalence of the pregnant teen. They further suggested that this ambivalence may originate from a sense of inadequacy and dependence on the mother. The authors found that conflictual and nonsupportive relationships among family members, a lack of respect and support for independent functioning, a lack of encouragement of open expression of

ideas and feelings, and a relative lack of interest in intellectual and cultural experiences were related to the teen feeling more distress. Teens living with both natural parents or mother only tended to be more distressed than those not living with parents. Warren and Johnson (1989) found that girls who decided to give up their child for adoption tended to report more favorable family environments. There was a tendency (not statistically significant) to perceive their families as more supportive of open expression of feelings, self-sufficiency, and autonomy; significant differences were found only for cultural and economic factors when examining the postdelivery decisions made by the teens.

Research findings on the family environments of pregnant and parenting teens are generally consistent regarding family structure and its effects on teens. Moore and Hofferth (1980) concluded that the family of origin seemed to have a strong impact on the age when a female began childrearing. The authors found that being reared in an intact family was positively related to educational attainment and to age of family formation. They found that having an intact family led to delayed sexual activity in teen daughters, possibly as a result of a higher level of supervision of teens' activities.

Similarly, Ulvedal and Feeg (1983) found several characteristics common to families with pregnant teens; these included the absence of a biological father, alcohol abuse,

and a mother and sisters who also were pregnant as teens. They found that while the teen described her relationship with her mother as good, rather than fair or poor, the teen's relationship with the male figure in the home at the present time was described as fair or poor. Furthermore, the relationship with the mother seemed to improve with the teen's pregnancy. Often times, the male figure in the home was an alcohol abuser; the teen also tended to choose a boyfriend who abused alcohol and drugs. Hayes (1987) also found that teens who had grown up in fatherless families and those who had mothers who were teen parents had a higher risk of becoming pregnant as a teen.

Landy et al. (1983) described the family of the pregnant teen as characterized by a close, symbiotic, and overdependent relationship with the mother, combined with a distant or absent relationship with the father. Daughters described their fathers in very negative terms or indicated that they hardly knew their fathers; the fathers were either physically distant or emotionally distant, as seen by the lack of communication between the daughter and father. The teens seemed to lack the expectation of a stable relationship with a male and became involved with the most undesirable men (i.e., men who were in and out of jail or alcoholic and/or heavy drug users). These teens also doubted their ability to maintain a satisfactory relationship with a male, which seemed to stem

from their poor relationship with their father. Furthermore, Landy et al. (1983) found that their teens reported good relationships with their mothers even though this relationship was of a symbiotic, overprotective, and smothering type. Although the teens felt anger and ambivalence toward the mother, they were usually pulled toward them. This study indicated that the pregnant teen is likely to come from a broken home, to have experienced unstable family relationships, and been abandoned by at least one parent. The authors concluded that the teens seemed content with and thus motivated to reconstruct their relationships and experiences with their mother by becoming pregnant.

Oz and Fine's study (1988) also supported previously cited research that sibling deviance and home instability were significant contributing factors to teen pregnancy. Problems at home included an alcoholic or violent father, a brother who had spent time in jail, the presence of sexual abuse, or placement in foster care. A distinction was found between teen mothers and teen nonmothers concerning sexual abuse. Specifically, they reported that teen mothers experienced more incidents of sexual abuse, often times occurring with several family members; teen nonmothers, if sexually abused, experienced only a one-time occurrence and usually with a stranger. The authors concluded that most teen mothers had troubled childhoods. They found that while these girls did

not plan to get pregnant, they were happy to discover the pregnancy. They wanted to leave their traumatic childhood experiences and powerlessness and enter adulthood.

In their study of case reports, Elkes and Crocitto (1987) found several common themes in the family backgrounds of their sample of five pregnant teens. First, none of their subjects came from intact families. Furthermore, there was a lack of trust in family members. Strained relationships with parents, especially dominant male "father figures," was another common characteristic in these teens' families. Contact between the teen and the most significant caretaker (i.e., the parent or the person who reared the teen) was maintained after the pregnancy; yet this relationship changed from a parent-child relationship to a friend-friend relationship. Polit et al. (1982) found that mothers provide the most emotional support to their teen daughters. They also found that except for boyfriends, males generally were cited as less supportive than females (Polit et. al., 1982). According to Elkes and Crocitto (1987), the teens showed signs of drug and alcohol abuse; at least one parent of each teen was also a substance abuser. Emotional and physical abuse in the family were common. Physical discipline was considered an acceptable mode of punishment. The girls also were attracted to physically abusive boyfriends and found their behavior acceptable.

Other researchers have concentrated on the subsystem functioning of the family as a possible contributing factor to teen pregnancy. Romig and Thompson (1988) stated that "teenage pregnancy is not an individual dysfunction but is indicative of systemic dysfunction, regardless of the specific demographic characteristics of a given family" (p. 143). They suggested that many of these families were dysfunctional because the subsystem boundaries were not clear. When the father-daughter or mother-daughter subsystems were not clear, the result may have been that the daughter was used as a scapegoat, in a cross-generational coalition, or in a detouring-supportive triangle (i.e., the parents ignored their problems in order to help their child who had problems). When these subsystem boundaries were unclear, the teen's autonomy was discouraged and the functioning of the family became unhealthy. The authors speculated that there may have been a family motivation, in addition to the teen's motivation, in preserving the dysfunctional family because they were comfortable and familiar with it. The teen may have become pregnant as a means of staying dependent on the family at a time she would normally have been expected to move out of the house and gain independence, as in the case of a teen leaving for college.

In support of Romig and Thompson' (1988) findings, Daniels (1990) concluded from her review of literature that

the boundaries of parent-as-parent and parent-as-peer often become blurred in the single-parent family. Because the teen is often times put in the role of support person, nurturer, confidant, and partner, the attachment between parent and teen resulting from these roles is threatened when the teen tries to separate from the parent.

Moreover, Geber and Resnick (1988) compared the functioning level of the family of origin for pregnant teens who decided to parent with those who decided to place their child for adoption. Although they found no differences in the level of family functioning between these two groups, they did find that the pregnant teens, when considered as a single group, had an overall lower level of functioning than the norm. The researchers found that both groups of teens desired greater adaptability and cohesion in their families.

Romig and Bakken (1990) also examined whether parenting status among teens (parenting, pregnant, or never pregnant) related to perceived levels of family cohesion and adaptability or to levels of ego development. Ego development was studied in terms of self, interpersonal skills, cognitive style, and impulse control. They found that pregnant teens perceived their families as less adaptable and therefore more rigid than the other two groups; additionally, the pregnant teens described their families as more extreme on levels of ego development than the other groups. They concluded that

some conformist teens may be more at risk for pregnancy due to a tendency to have more conventional sex role norms that inhibit their ability to assert their wishes in sexual matters.

Although there are several studies on the family environments of pregnant teens, few studies compare pregnant or parenting teens to nonpregnant/nonparenting teens to determine if there are actual, versus perceived, differences in their families. Ralph, Lochman, and Thomas (1984) studied personal and family history information and teen psychosocial adjustment on 19 pregnant and 20 nonpregnant fifteen- and sixteen-year-old black teens. Specifically, they looked at whether there are characteristics distinguishing pregnant from nonpregnant teens and if such differences indicate poorer family or personal adjustment on the part of the pregnant youth. The authors found that the pregnant teens were more likely to have mothers with a lower level of education, later sex education, a greater number of brothers, better family adjustment, but poorer vocational-educational adjustment than the nonpregnant group. They concluded that by having a larger number of brothers and later sex education, they not only may have had more frequent contact with male peers who were their brothers' friends, but also less knowledge about the consequences of heterosexual behavior.

Ralph et al. (1984) speculated that pregnant teens had less well-defined and optimistic vocational goals and a mother with less education as a role model; therefore, the teens might feel greater security within the home and with family-related roles. The nonpregnant group had more interests in vocational opportunities beyond the family, higher-educated role models, possibly less contact with male peers, and greater sophistication about heterosexual behavior; therefore, they might have a greater incentive and ability to avoid situations that would place them at risk for pregnancy. Ralph et al. (1984) did not find in their sample that pregnancy was associated with a pattern of significant psychological or familial disturbance. However, their findings have limited generalizability because their sample consisted of low-income black patients at a teen clinic.

Gottschalk, Titchener, Piker, and Stewart (1964) interviewed pregnant and nonpregnant teens matched on socioeconomic and cultural background, neighborhood, and educational level. They found that both the black and white pregnant teens in their sample started menstruating at a younger age than their controls. Gottschalk et al. (1964) suggested that because they were more likely to have advanced sexual maturation, and therefore fertile at an earlier age in life, they were more likely to have conceived a child at an earlier age than those teens who started menstruating at a

later age. Furthermore, they found a combination of social and psychological events and experiences that promoted greater receptiveness towards sexual intercourse. These factors included a relative absence of parental supervision and discipline and religious preference or church attendance. This supports the results of Alvarez, Burrows, Zvaighat, and Muzzo (1987) who found that the majority of pregnant teens did not practice any religion. Gottschalk et al. (1964) also found that unwed black mothers more frequently kept their babies than unwed white mothers. For blacks, they found no difference in the occurrence of broken homes between the pregnant and nonpregnant teens. However, the white pregnant teens were less likely than the white nonpregnant teens to have a father or stepfather in their home.

Goldfarb, Mumford, Schum, Smith, Flowers, and Schum (1977) examined a number of behavioral, social, and physical factors that may increase susceptibility to unplanned or unwanted pregnancy. They interviewed pregnant and nonpregnant teens about background information, family background, formal education, sex education, sexual behavior, birth control information and use, and anticipated care of child. They found that an indigent teen (i.e., one reared in a low-income family that may be considered needy) who came from a large family, had received sex education late and from an acquaintance, and whose academic performance was poor or

disrupted, is literally thousands of times more susceptible to pregnancy than the indigent teen who came from a small family, had attained normal grade level, and had received her first sex education early and at home. None of the factors were strong predictors individually; yet when they were added together, their predictive power increased dramatically (Goldfarb et al., 1977).

In conclusion, the research supports the view that the family environments of pregnant and parenting teens are markedly different than those of nonpregnant/nonparenting teens. The findings suggest that pregnant and parenting teens' families possess characteristics that are less than desirable in many instances.

SELF CONCEPT

Theorists and researchers studying the stability of self concept over the teen years vary on their opinions and findings. Various developmental theorists (e.g., Freud, Erikson, Lewin, and McCandless) have viewed adolescence as a time of discontinuity in psychological development; it is predicted that a person's view of the self will change dramatically during the teen years. Monge's (1973) cross-sectional study on teens' self concept revealed that self concept was essentially constant through adolescence; however, slight changes in self concept were more evident for girls than for boys. Therefore, he did not support the view of discontinuity in self concept that many developmental theorists have proposed.

Barnes and Farrier (1985) also studied the stability of self concept over a nine-year period. They interviewed fifth and sixth graders and did a follow-up interview after they had completed high school. At the initial interview, females had significantly higher self concepts than males. They found that while the self concept of males increased significantly over time, the self concept of females did not increase significantly. Thus, there were no significant differences between the sexes at the second interview. Barnes and Farrier (1985) concluded that youth do not undergo great changes in

self concept during early adolescence. Furthermore, they stated that since there is such stability, if a person has a negative self concept when entering adolescence, a person will enter adulthood with the same negative feelings.

Researchers have been interested in how the family affects teens' self esteem. Palazzi, De Vito, Luzzati, Guerrini, and Torre (1990) studied the occurrence and subjective importance of life events in teens and how they affect self image. They defined self image as "a multidimensional construct which is measured by assessing attitudes towards the self in a broad range of areas or domains" (p. 54). The instrument measuring self image encompassed 11 dimensions: impulse control, emotional tone, body image, social relations, morals, sexual attitudes, family relations, mastery of the external world, psychopathology, superior adjustment, and vocational and educational goals. Palazzi et al. (1990) found that a disturbed self image appears to be significantly associated with serious abuse either within the family or outside the family, serious disagreement between parents, and a sudden decrease in family income. Trends showed that having had an abortion is related to a disturbed self image.

Leonardson (1986) examined selected academic and personal variables in predicting self concept scores of high school students. He collected data on the perceived physical health,

perceived home environment, marital status of parents, birth order, number of siblings, extent of participation in extracurricular activities, scholastic aptitude, GPA, and sex of subject. Leonardson (1986) found that self concept was significantly correlated with GPA, health, parents' marital status, home life, and extracurricular activities. Being reared in a broken home was associated with a negative self concept; yet, having parents who were separated, not yet divorced, was not significantly correlated with self concept of the teen. He concluded that since some of the factors that correlated with self concept (i.e., GPA, health, and extracurricular activities) can be manipulated, self esteem can be improved by making changes in these areas of one's life.

Parish and Parish (1983) supported Leonardson's (1986) results regarding the relationship of self concept to family structure and family concept. They studied the adjectives children in the fifth through eighth grades used to describe both themselves and their families. A high number of positive adjectives used to describe the family resulted in classifying the family situation as "happy." A high number of negative adjectives used resulted in the classification of an "unhappy" family situation. Even though the authors examined each of the 48 adjectives separately, only the general results will be presented here. There were significant differences in the

positive and negative adjectives the children used to describe themselves depending on whether the child came from a divorced, intact, or reconstituted family. Children who had chosen positive adjectives (e.g., happy, cheerful, and wonderful) to describe their family were considered to have high family concepts and reared in a "happy" family situation; those who tended to choose negative adjectives (e.g., dumb, bad, and mean) were considered to have low family concepts and reared in an "unhappy" family situation. Those children with high family concepts also were more likely to choose positive adjectives to describe themselves; negative adjectives were chosen more often by children with low family concepts.

Furthermore, Parish and Taylor (1979) studied the effects of divorce and father absence on children's and teens' self concepts. They found that the subjects who had experienced father loss through divorce and whose mothers had not remarried had significantly lower self concepts than did those who were from intact families. Those subjects whose mothers had remarried had a lower self concept than those from intact families; however, this result was nonsignificant. Young and Parish (1977) found the same results in their study of the effects of family structure on the self concept of college students. Parish and Taylor (1979) suggested that it may not actually be the divorce that contributes to lower self concepts but instead the results of a divorce (e.g., lowered

socioeconomic conditions, working mothers, and only one parent functioning for both roles).

Studies of self esteem in pregnant teens have had conflicting results. Differences in self esteem have been related to the amount and type of support the teen perceives she is receiving (Stern & Alvarez, 1987). Stern and Alvarez (1987) found that pregnant teens, especially older teens, exhibited a "disruption" of self image. It was concluded that younger pregnant teens were more likely to be living at home and therefore had a more supportive family environment.

In a study of pregnant/parenting teens, Crase and Stockdale (1989) found self esteem was significantly higher for teens who were pregnant and/or parenting than for those who were nonpregnant and nonparenting. Since self esteem was not measured until after the teens were pregnant, the authors stated that it was unclear whether the event of becoming pregnant, and the social support related to pregnancy, was the cause of these higher levels of self esteem or whether the pregnant/parenting teens had higher levels than the nonpregnant/nonparenting teens before the event of and support surrounding pregnancy. Crase and Stockdale (1989) hypothesized that pregnant/parenting teens may exhibit higher levels of self esteem because the event of pregnancy brings much attention to the teen from friends and family; the teen may perceive these high levels of attention as positive.

Held (1981) found that self esteem for the pregnant teens was comparable to nonpregnant teens' self esteem. Self esteem was higher among the black teens keeping their babies who attended the day school for pregnant teens; whites, Mexican-Americans, and those black teens who were not enrolled in school had significantly lower self esteem. Furthermore, Held (1981) found that white teens, more often than black or Mexican-American teens, rated their pregnancy positively (i.e., they did not perceive the pregnancy as disadvantageous). White teens also had lower self esteem scores than black or Mexican-American teens suggesting that self esteem was not related to the pregnancy itself. Results showed that if the pregnant teen was the oldest child, she had the highest self esteem and perceived the most support for the pregnancy. The middle child had the lowest self esteem, was more likely to be in school and chose adoption most often. Held (1981) also found that even though the teen perceived her mother as being the person most disapproving of her pregnancy, she turned to her mother most often for support. She stated that if the teen did not get married, then the mother, daughter, and baby most likely would live together as a family. In conclusion, Held (1981) suggested that many things may contribute to a pregnant teen's self esteem including birth order of the teen, support from her mother, views of her pregnancy, and school enrollment.

Streetman (1987) studied the self esteem of unmarried females between the ages of 14 and 19. Over 75% of their sample were teen mothers. He examined the teens' reading and mathematics levels, attitudes about themselves, background characteristics, self esteem, and feelings of social isolation, normlessness, and powerlessness. Normlessness is defined as "a measure of lack of strong purpose or goals, and possible conflict in normative guides to behavior" (pg. 461). The average age of the respondents was 17.6, yet their reading and mathematics abilities only approached the seventh-grade level. Because only 43% of the sample completed the abilities section of the study, the conclusions drawn from the scores of their reading and mathematics abilities should be examined cautiously. Streetman (1987) found that 14-17 year olds had significantly higher scores than the 18-19 year olds on the Rosenberg Self Esteem scale. However, no differences on self esteem were found when using the Coopersmith scale. Streetman (1987) also found no differences in self esteem between childless teens and the teen mothers; they caution that this result could be confounded because their teen mothers were 1.2 years older than their childless teens. Furthermore, Streetman (1987) found that those subjects, both the teen mothers and the nonmothers, with higher self esteem were more socially isolated. He speculated that this might be a voluntary action of the teen because of her strong positive

feelings about herself. There also was a modest negative relationship between self esteem and normlessness. Streetman's (1987) conclusions were that having a child resulted in 1) having an impact on personal and social identity; 2) bringing the teen mothers closer to their own mothers because of their interaction on more of an adult basis. The degree to which self esteem is mediated through social interaction and group membership, and not as a direct. result of cognitive abilities, should be a concern for future studies.

In conclusion, there is much controversy over self esteem in teens, especially when comparing pregnant and nonpregnant teens. A degree of consistency has been found in the following results: girls had higher self esteems than boys at every stage of adolescence; teens' self esteem increased very slightly over the teen years; self esteem has been found to be stable; and self esteem decreased if there was abuse in the family, a decrease in income, parental discord, or a parental separation or divorce. The controversy remains over whether pregnant teens actually have a higher self esteem than nonpregnant teens or whether confounding variables are affecting the results. However, results have suggested that pregnant teens' self esteem depends on their social support, perceptions of the pregnancy event, school enrollment and achievement, and certain family variables.

SCHOOL ACHIEVEMENT IN TEENS

Few researchers have directly studied the IQ of pregnant teens; instead, they have examined factors which affect their achievement in school. The results of several of these studies are discussed in this section.

Steinberg, Elmen, and Mounts (1989) studied the relationship between authoritative parenting styles, psychosocial maturity, and academic success among firstborn nonpregnant teens, ages 11 to 16. Teen's work orientation, self-reliance, and identity were assessed by the Psychosocial Maturity Inventory (Greenberger, Josselson, Knerr, & Knerr, 1974). They divided authoritative parenting into three areas, acceptance, psychological autonomy, and behavioral control. Questionnaires, in each of the three areas of study, were filled out by the teens; therefore, it was the teen's perception of the parenting practices employed by their parents that was being measured. Furthermore, they examined the hypotheses that these three areas of authoritative parenting contribute to the psychosocial development of the teen, which in turn facilitates academic success. Lastly, they studied the effect the teens' sense of autonomy (i.e., self-reliance, identity, and self-direction) had on the link between authoritative parenting and academic success.

Steinberg et al. (1989) found that all three aspects of authoritative parenting made independent contributions to school achievement; furthermore, this result was mediated in part through the effects of authoritative parenting styles on the teen's development of a healthy sense of autonomy, and more specifically, on the teen's development of a healthy psychological orientation toward work, assessed by the Psychosocial Maturity Inventory. The authors concluded that a positive effect of parents treating their teens firmly but democratically was that the teen developed positive attitudes toward, and beliefs about, their achievement, and therefore being more likely to do better in school.

Steinberg et al. (1989) felt that a limitation of their study was that the information on parenting practices was obtained from teens rather than through observation. Therefore, it was the teens' perception of their parents that contributed to their performance in school. Another limitation of their study was that most of their subjects were from white, middle-class families; it is more common for these families to use authoritative parenting styles. Therefore, the effects of this parenting style should be examined in other groups. Furthermore, the authors stated that their study suggests that the relation between teens' self esteem, measured by the identity subscale of the psychosocial maturity scale, and their school performance is indirect. They stated

that no systematic research has directly studied the effects of self esteem on school performance.

Monge (1973), in his study on self concept of sixth through twelfth graders, found that boys at every age level rated themselves higher than did girls on an adjustment factor. A well-adjusted individual is defined by Monge as "one who has attained a comfortable balance with his environment, adjusted to its rhythms of ebb and flow, and built a comfortable niche in life" (p. 387). He found that both girls' and boys' scores declined as they got older suggesting that as teens grow older, they find it increasingly difficult to live within the social system revolving about the school. He hypothesized that teens may find it complicated to respond to the demands of their parents and society to become independent while at the same time complying with the authority of the school. Monge (1973) suggested that, while boys appear to be able to handle these conflicting demands, teen girls may find the ambivalence of society's attitudes toward school, work, and marriage more difficult to handle.

A number of researchers, examining educational achievement of pregnant and parenting teens, have questioned the direction of causality between the variables of school attendance and pregnancy (Adams, Dozier, Goode, Langdon, Nelson, Thompson, & Wiberg, 1987; Roosa, 1986). These studies both found that a large number of teens leave school before

they ever become pregnant; both also found evidence for the reverse pattern. It has been shown that pregnant teens who stayed in school while pregnant had better study habits, better concentration, and better retention of knowledge during pregnancy in comparison to their study habits, concentration, and retention during pre-pregnancy and post-delivery periods (Barglow, Bornstein, Exum, Wright, & Visotsky, 1967). Yet, they returned to their original pre-pregnancy habits in academic studies after delivery. Even though these studies did not consider intelligence per se in these teens, they did show that poor school habits, which often times are related to intelligence, may be a contributing factor in teen pregnancy.

Goldfarb et al. (1977) found that the one variable which best predicted "susceptibility" to unplanned pregnancy was a discrepancy between normal and attained grade level. They found that pregnant teens had a negative grade level discrepancy nine times more often than nonpregnant teens. They suggested that factors other than ability may account for this discrepancy because the subjects' scores on ability tests were not predictive of susceptibility to pregnancy.

Held (1981), in a study of self esteem and social support of pregnant teens, found that black teens were more likely than white or Mexican-American teens to plan to return to school after the pregnancy. She found that black teens and their mothers perceived the pregnancy as disadvantageous; yet,

the teens were less likely to allow it to disrupt their education. Held (1981) stated that the teens' attitudes toward school and satisfaction with it should be examined. She suggested that school dissatisfaction may be related to willingness to risk pregnancy.

Gottschalk et al. (1964) found that although the average educational level of their pregnant and nonpregnant teens did not differ, black pregnant and nonpregnant teens had somewhat better average grades than white pregnant and nonpregnant teens. Gottschalk et al. (1964) also found that their black teens had long term educational and career goals more often than their white teens. More of the pregnant black girls were planning to complete high school after childbirth.

Alvarez et al. (1987) studied the sociocultural characteristics of pregnant and nonpregnant teens of low socioeconomic status. They found that half of the pregnant teens came from intact families, while two-thirds of the nonpregnant teens came from intact families. They also found that the IQ of pregnant teens was significantly lower than that of the nonpregnant teens. These results suggested that the lower levels of education of pregnant girls could be explained by their lower IQ; many researchers have attributed the lower education levels of pregnant girls to the pregnancy and not to such factors as IQ. Alvarez et al. (1987) suggested that teens of medium or low socioeconomic status

drop out of school more often and are more likely to come from unstable families which provide less psychosocial stimulation and an excess of free time; therefore, these teens have less supervision and more opportunity to get into trouble.

In summary, research results have shown that variables such as attitudes towards school, accepting authority figures, family environment, self esteem, study habits, IQ, ability, vocational and educational aspirations, and racial differences all contribute to how well a teen performs in school. Researchers have found that teens who have a deficit in any of these areas, and especially in more than one area, may be at risk educationally. There is much controversy surrounding the possibility that pregnant teens have lower average intellect than nonpregnant teens, or whether there are other contributing factors (e.g., poorer habits, less parental guidance, and lower motivation or aspirations) that lead to their lower educational attainment. In conclusion, research conducted on pregnant teens' intellectual ability needs to encompass the many variables that influence ability.

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PAPER 2: CHARACTERISTICS OF PARENTING AND NONPREGNANT/NONPARENTING TEENS

ABSTRACT

The purpose of this study was to examine the differences in family environments between parenting teens and nonpregnant/nonparenting teens. Parenting teens (N = 56) and nonpregnant/nonparenting nominated friends (N = 27) responded to paper and pencil questionnaires and open-ended questions concerning background characteristics, family environments, self esteem, verbal ability, birth control use, and mother-daughter relationships. T-test analyses indicated that friends were older, more highly educated, and reared more often in intact families than the parenting teens; friends also had a higher self esteem, higher GPAs, more financial aid sources, and attended church more regularly than parenting teens. Furthermore, the nominated friends had friendships of longer duration, felt influenced by friends concerning sexual activity and contraceptive use, and had more pregnant friends in the past than the parenting teens. Friends were more likely not to entertain ideas of being a teen parent. A regression analysis indicated that pregnancy was predicted by lower levels of family cohesion, higher self esteem, lower educational levels in teens, and having a mother who was younger at the birth of her first baby. Descriptive statistics indicated that teens mentioned the following aspects as either ways in which they would be similar or different from their parents in childrearing: family milieu,

discipline, childrearing values, parental control, affect/emotional involvement, religion, material resources, expectations, and interaction patterns. Good and bad aspects of the teens' status (parenting versus nonpregnant/ nonparenting) reported by the teen were: motherhood, autonomy, education, living situation, social support, partner relationship, psychosocial, parent/child relationship, financial, and work commitment.

INTRODUCTION

Teen pregnancy is a grave concern to society as a whole because of the financial, societal, and emotional repercussions. Over half of the 1 million teen girls who become pregnant every year choose to give birth; over ninety percent of these teens choose to keep their babies (Hayes, 1987). Teen mothers and their new families are at risk educationally, occupationally, and socially because of early pregnancy. Yet, these teens may have been at risk long before they became pregnant. Family systems theorists suggest that teen mothers are from families who also are at risk educationally, occupationally, and socially (Fox, 1981). Thus, the family systems approach hypothesizes that it is not only the event of the pregnancy but also her family of origin that places the teen at risk for educational, occupational, and social deficits.

Family systems theorists propose that, in order to study an individual's behavior, a larger system needs to be addressed (Fox, 1981; Minuchin, 1985). They suggest that the characteristics of and relationships in the family will affect the behavior and development of individual family members. Specifically, differences in levels of adaptability, self-regulation, and subsystem boundaries affect the level at which a family functions -- normal versus dysfunctional (Fox, 1981; Minuchin, 1985). Additionally, the amount of family resources

and how effectively they are used will determine how a family functions (Fox, 1981; Minuchin, 1985). Fox (1981) suggests that various sociocultural and economic characteristics of families (e.g., racial background, education, and parents' income level), established patterns of relating to other family members, and the quality of affective relationships among family members each contribute to the family's functioning.

Furthermore, Minuchin (1985) suggests that firm, but adaptable subsystem boundaries are important in maintaining a normal level of functioning. The spousal, parental, and sibling subsystems each need to have clear, firm boundaries so as not to threaten the other subsystems. As development occurs in the family members (e.g., puberty or retirement), the subsystem boundaries and rules of interaction need to change (Minuchin, 1985). Thus, if the boundaries are unclear to the family members or are not adaptable in times of needed change, dysfunction is likely to occur.

Another family characteristic that has the potential to affect family functioning is self-regulation of individual family members. In a normal functioning family, when one family member disturbs the homeostasis, the other members adapt their own behavior, or self-regulate, to bring equilibrium back to the family unit (Minuchin, 1985).

Fox (1981) suggests that teens may become pregnant as a way to establish independence from their parents or to compensate for the perceived lost love and attention from other family members. He attributes some instances of teen pregnancy to a lack of family resources. At times when the teen and other family members are undergoing different developmental stages simultaneously, problems in role adjustment are more likely to occur (Fox, 1981). Thus, if the family lacks, or ineffectively uses, the resources to meet the teens' new psychological or social needs, the teen may seek to meet her needs through pregnancy (Fox, 1981).

Bronfenbrenner (1986) emphasizes the importance of examining the influences of external environments on family functioning in addition to the family's ability to promote healthy development of their children. Factors such as peer groups, school, work, parental support networks, and community all influence family functioning (Bronfenbrenner, 1986). Thus, when examining the effects the family has on whether a teen pregnancy occurs, external environmental influences affecting the family should be taken into consideration.

Numerous variables have been examined to determine what factors contribute to a teen girl becoming sexually active and subsequently pregnant. Personality, social network, educational and occupational goals, and decision-making skills are among the variables studied. Yet, limited research has

been conducted on the family backgrounds of teen mothers; more rare are studies comparing teen mothers with control groups (Ulvedal & Feeg, 1983). The studies that do compare pregnant/parenting and nonpregnant/nonparenting teens have severe limitations; small sample sizes and specific socioeconomic classes or races being studied restrict the generalizability of the findings. Furthermore, most of the studies use either qualitative or quantitative measures to examine family relationships; a combination of these data collection methods would provide more in-depth knowledge of the teens' perceptions of their family relationships.

The present study was undertaken to compare the family environments of parenting teens with a comparable group of nonpregnant/nonparenting teens. A major goal of the study was to compare the two groups on family dynamics and family environment dimensions in the teens' families of origin. Additionally, the two groups of teens were compared on self esteem, verbal ability, and background variables such as age, marital status, and education levels.

Characteristics that may place the teen at risk for early pregnancy include broken homes and poor or strained family relationships (Elkes & Crocitto, 1987; Ulvedal & Feeg, 1983). Substance abuse (Elkes & Crocitto, 1987; Oz & Fine, 1988; Ulvedal & Feeg, 1983), physical abuse (Elkes & Crocitto, 1987), and sexual abuse (Oz & Fine, 1988) also were found to

place the teen at risk. Other characteristics include intergenerational teen pregnancies (Ulvedal & Feeg, 1983), large family size, and poor educational and career goals (Ralph, Lochman, & Thomas, 1984).

The marital status of the teens' parents has been correlated with early childbearing. Several researchers have found that pregnant teens are more likely to come from broken homes than are nonpregnant teens (Elkes & Crocitto, 1987; Hayes, 1987; Moore & Hofferth, 1980; Mueller & Cooper, 1986; Ulvedal & Feeg, 1983). The presence of a father in the home may be a deterrent to precocious sexual activity because of increased levels of adult supervision and positive role modeling and guidance; high career and educational goals and their attainment often times have been found in intact homes (Moore & Hofferth, 1980; Mueller & Cooper, 1986). Good family relationships and good parental marriages have been associated with less precocious sexual activity in teen girls and therefore less risk for teen pregnancy (Abernethy & Abernethy, 1974; Kearns & Crockett, 1989).

Emotional distance as well as strained or poor relationships between the teen and her father were other characteristics found in families with a pregnant teen (Elkes & Crocitto, 1987; Landy, Schubert, Cleland, Clark, & Montgomery, 1983; Ulvedal & Feeg, 1983). However, some studies have found the pregnant teen's relationship with her

mother to be good; at times, this relationship was more of a symbiotic, overprotective, and smothering type (Landy et al., 1983; Ulvedal & Feeg, 1983). In contrast, Abernethy (1973) found that girls who had ended their pregnancies in abortions, compared to those who were not pregnant, were more likely to be alienated from their mothers in adolescence, yet experienced intimate relationships with their fathers that excluded their mothers.

The presence of sexual abuse, especially familial sexual abuse, has been found to be a significant link in teen pregnancy (Abernethy & Abernethy, 1974; Oz & Fine, 1988). Other types of abuse found in pregnant teens' families included alcohol, drug, emotional, and physical abuse (Elkes & Crocitto, 1987; Oz & Fine, 1988; Ulvedal & Feeg, 1983). Teen mothers tended to have boyfriends who were likely to be alcohol or drug abusers, to be physically abusive, or to have spent time in jail (Elkes & Crocitto, 1987; Landy et. al, 1983; Ulvedal & Feeg, 1983).

Several researchers have suggested that some teen mothers have been motivated either consciously or unconsciously to become pregnant. Landy et. al (1983) suggested that teen girls wish to reconstruct their own experiences with their mothers and therefore become pregnant as a means of doing so. Oz and Fine (1988) suggested very different motivations for becoming pregnant; they found that teens who were in highly

dysfunctional families were happy to be pregnant even if they did not plan the pregnancy. Oz and Fine (1988) suggested that teens see this event as a way to leave their traumatic childhood experiences and powerlessness and enter adulthood.

Romig and Thompson (1988) found in some families of pregnant teens that the boundaries were not firm between certain subsystems, especially the parental subsystem which encompasses the parent-child relationship. Autonomy in the child often was discouraged, which led the family to function at an unhealthy level. Both the teen and her family seemed motivated to preserve the dysfunction because they were comfortable and familiar with it; the system was preserved when the teen became pregnant and remained dependent on her family.

Similarly, Daniels (1990) surmised from a review of the literature that in single-parent families often there is more of a friend-friend relationship, versus a parent-child relationship, between mother and daughter. When the teen tries to leave the home, the attachment between mother and daughter is threatened; therefore, the teen may seek a way to stay in the home. In these cases, the teens and their families welcome the pregnancy because it preserves the family unit that already is intact. Likewise, Warren and Johnson (1989) found that a teen's dependency on her mother led to a lack of autonomy in the teen. In conclusion, the research on

dependency and lack of autonomy suggests that these family characteristics lend a welcoming stage for a teen who decides to stay in the home because of an early pregnancy.

Repeated teen pregnancies across generations is another characteristic found in families of teen mothers. It is common for the teen's mother or sisters also to have been pregnant as teens (Hayes, 1987; Ulvedal & Feeg, 1983).

Family dimensions, such as adaptability, cohesion, and ego development, have been studied in relation to the risk of teen pregnancy (Romig & Bakken, 1990). Ego development was studied in terms of self, interpersonal skills, cognitive style, and impulse control. Romig and Bakken (1990) found the families of pregnant teens less adaptable and more extreme on levels of ego development than families of nonpregnant teens.

Self esteem, which is influenced by many people and events, may be a contributing factor to teen pregnancy. Palazzi, De Vito, Luzzati, Guerrini, and Torre (1990) found that serious abuse, serious parental disagreement, and a sudden decrease in family income (which could result from a divorce) were significantly associated with a disturbed self image in the teen. Teens' self esteem has been found to be significantly related to the marital status of parents; teens reared in a broken home or an unhappy family situation have lower self esteem than those from intact families (Leonardson,

1986; Parish & Parish, 1983; Parish & Taylor, 1979; Young & Parish, 1977).

Conflicting results are found when examining pregnant teens' self esteem. It appears that pregnant teens' self esteem depends on several factors including their social support, perceptions of the pregnancy event, school enrollment and achievement, and certain family variables (Crase & Stockdale, 1989; Held, 1981; Stern & Alvarez, 1987; Streetman, 1987). Held (1981) found self esteem of pregnant teens to be similar to nonpregnant teens; yet she found that black teen mothers had higher self esteem than white teen mothers. There also are conflicting results when studying age effects on self esteem in adolescence. Some studies found that self concept remained essentially constant, other than very slight increases, throughout adolescence (Barnes & Farrier, 1985; Monge, 1973). However, Streetman (1987) found that older teen girls had lower self concepts than younger teen girls. Therefore, no sound conclusions can be formed about the influence of self esteem on teen pregnancy.

Attitudes towards school, self esteem, study habits, IQ, ability, vocational and educational aspirations, and racial differences all contribute to a teen's performance in school. Researchers examining educational achievement of pregnant and parenting teens have questioned the direction of causality between the variables of school attendance and pregnancy

(Adams, Dozier, Goode, Langdon, Nelson, Thompson, & Wiberg, 1987; Roosa, 1986). Evidence has been found that teens drop out of school before becoming pregnant, as well as teens becoming pregnant and then dropping out. Barglow, Bornstein, Exum, Wright, and Visotsky (1967) suggested that poor school habits, which may be indicative of intelligence, may be a contributing factor in teen pregnancy. Held (1981) suggested that other factors, such as dissatisfaction with school, may be related to willingness to risk pregnancy. Alvarez, Burrows, Zvaighat, and Muzzo (1987) found that pregnant teens had significantly lower IQs than nonpregnant teens. They suggested that the low level of education of pregnant teens could be explained by their lower IQ rather than the event of pregnancy.

Specifically, the purpose of the present study was to investigate and compare the family environments of teens who are parenting with those who are nonpregnant/nonparenting. Self esteem and IQ, often times impacted by family environments, may influence teens' motivation levels and overall functioning. Therefore, it also was the intention of this study to compare the self esteem and verbal ability, as an index of IQ, of the two groups of teens. The impact of background variables, such as parents' and teens' education level and parents' marital status, on the risk of teen

pregnancy also was investigated in this study. Thus, the objectives of the study were:

1) To compare parenting and nonpregnant/nonparenting teens on family dynamics (i.e., Togetherness and Dysfunction) and family environment dimensions (i.e., Cohesion, Independence, Conflict, Expressiveness, Achievement Orientation, Intellectual-Cultural Orientation, Moral-Religious Emphasis, Organization, Control, Active-Recreational Orientation) in the teens' families of origin.
2) To compare parenting and nonpregnant/nonparenting teens on background variables such as age, socioeconomic status of families of origin, completed education level of teens and parents, and marital status of teens and parents.
3) To compare parenting and nonpregnant/nonparenting teens on self esteem and verbal ability.

METHOD

Subjects

Subjects in this study were 56 parenting teens and 27 nonpregnant/nonparenting teen friends from the Midwest. Parenting teens (N = 32) were involved in an ongoing research project which followed the teens through pregnancy and the first stages of parenting (Crase & Stockdale, 1989); the other 24 parenting teens were participants in a related study (Gants, 1991). Parenting teens (N = 44) were enrolled in teen pregnancy or parenting programs (e.g., MELD, TAPP, PORCH) and/or enrolled in public high schools when they became subjects in the original studies. Nonpregnant/nonparenting teens, who served as controls, were friends of the parenting teens whose names were supplied by the parenting teens.

Background characteristics of the teen mothers and the nominated friends are in Table 1 and Table 2. Although four of the parenting teens were over 20 years old, they were teens when they entered the original studies and therefore were retained in the sample. As a result, six friends were over 20 years old but were still referred to as part of the teen sample. None of the friends were pregnant or parenting at the time of the interview.

Instruments

Family Environment Scale (FES) This questionnaire, developed by Moos (1974), was used to measure the teens' perceptions of the social-environmental characteristics of their family of origin. The 90-item questionnaire contains 10 subscales which assess Relationship, Personal Growth, and System Maintenance dimensions. The Relationship dimensions are measured by the Cohesion, Expressiveness, and Conflict subscales. The Personal Growth dimensions are measured by the Independence, Achievement Orientation, Intellectual-Cultural Orientation, Active-Recreational Orientation, and Moral-Religious Emphasis subscales. The System Maintenance dimensions are measured by the Organization and Control subscales.

According to Moos (1981), test-retest reliabilities vary from .68 for the Independence subscale to .86 for the Cohesion subscale. Moos obtained a profile stability by correlating the means obtained at the first time the questionnaire was administered and the means from a second testing time; the mean 12-month profile stability was .71. Moos (1981) found that the family profiles were quite stable over time; yet, they also reflected changes occurring in the family.

Scoring involves adding the number of X's (defined by Moos) in each column, where columns represent each of 10 subscales, to derive a raw score. Either the raw score or a

converted standard score for each subscale can be used to compare a single member or an entire family to the norm score provided by Moos. A higher score on a scale indicated a higher level of that family characteristic.

Family Dynamics Questionnaire (FDQ) This questionnaire was developed by Hockaday and Reed (1990) after reviewing the literature on different types of abuse occurring in families. The instrument was designed to examine the characteristics of the environment in which the teen was reared; items address aspects of family functioning in regard to physical and sexual abuse, participation in family activities, and external support groups. The questionnaire contains 25 items which assess the extent to which the item content occurred in the teen's family. For example, "To what extent did anyone in your family hit, push, throw objects, or threaten others in a rough manner?" Responses are on a five point Likert-type scale where 1 represents "never" and 5 represents "always."

The questionnaire was administered to 348 students enrolled in various child development classes. Approximately two weeks after the first administration, students from two of the classes were administered the questionnaire a second time to examine test-retest reliability. At the first testing, students were told that they would be tested again and were to put either their mother's maiden name or a nickname at the top of their survey. Since the name they used was known only to

subjects, confidentiality was ensured. Because item responses were to be compared to teen mothers and their female friends, any questionnaires filled out by males were discarded; additionally, any of the test-retest questionnaires with incongruent answers on the general information section (i.e., age, sex, past pregnancy information) were discarded. Analysis were done on 317 undergraduates; 40 of these subjects, who were available for retesting, were used in the test-retest reliability analysis. The correlation coefficients for the questions for the 40 test-retest surveys ranged from .21 to .94 with an average correlation of .70.

A factor analysis done on 317 questionnaires yielded two factors. The first factor, Togetherness, included 12 items; the second factor, Dysfunction, included 11 items (see Table 3 for factor items). Items on the Dysfunction factor were recoded so that a high scoring on the factor would show low dysfunction in the family. Two items had factor loadings under .25 and were dropped from the factors. Two items had low loadings (i.e., .27 and .28) but were kept in the factors because the content of the items, sexual abuse and low adult supervision, were considered to be important and pertinent to the factor. The Togetherness factor had a Cronbach alpha of .78; the Dysfunction factor had a Cronbach alpha of .72.

T-tests on the Togetherness and Dysfunction factors between those students under age 25 ($\underline{N}$ = 283) and over age 25

(N = 33) were done to test for potential age group differences. No differences were found between the two groups on the factors; therefore, all 317 subjects, regardless of age, were included in the factor analysis.

Wechsler Adult Intelligence Scale - Revised (WAIS-R)

The 40-item Vocabulary Subtest from the Verbal IQ scale of the WAIS-R (Wechsler, 1981) was used as an indicator of verbal ability and/or academic potential. The Vocabulary Subtest was administered verbally to the teens. Reported reliability coefficients for the Verbal Scale range from .95 to .97; the reliability for the Vocabulary Subtest is .96 (Sattler & Ryan, 1990).

In this study, five interviewers administered the WAIS-R. For 65 of the subjects, responses to the WAIS-R were recorded verbatim during the test; the other 18 subjects were scored, without writing verbatim answers, as the subject made a response to the word. On the 65 questionnaires with verbatim responses, two independent judges scored the answers according to the scoring manual of the WAIS-R. Where there was a disagreement between the two judges, a third judge scored the response. In the rare instance where all three judges disagreed, a fourth judge scored the answer. A total score for verbal ability was calculated by summing the item scores, utilizing the score agreed upon by two of the judges. Calculations were done on the number of agreements on response

scores between the original two judges; the percentage of agreements on the responses of the 65 verbatim questionnaires was 96%, with a range of 88% to 100%. Because 18 of the questionnaires did not have verbatim answers written on them, the percentage of agreements on these questionnaires could not be computed.

Rosenberg's Self-Esteem Scale (RSE) This questionnaire uses a 10-item Guttman scale (i.e., a Likert-type scale used to measure a unidimensional concept) to assess global positive or negative attitudes toward the self (Rosenberg, 1965). Reliability has been established at .92 with a test-retest reliability coefficient of .85 (Wylie, 1961). Scoring consists of recoding five item responses to arrive at an overall score which reflects a positive image of the self. A higher score reflects higher self esteem.

Open-Ended Interview An open-ended questionnaire was developed to assess the teens' perceptions of their environment and their past and present relationships with their families and friends. Several items were adapted from Cohler (1981). The other items were written to assess use of birth control, relationships with friends and family members, aspects of parenting, how they spend their time, childrearing similarities and differences, and feelings about their present situation (Crase, Stockdale, Hockaday, & Reed, 1990). The form for the parenting teens contains eleven questions; nine

of the questions were modified to provide a comparable form for the friends. Two of the questions were omitted for the friends because they focused on child care and therefore were not appropriate. Six of the questions which fit the purpose of the study were investigated; the teens' relationships with their mothers and friends, birth control usage, childrearing similarities and differences, and good and bad feelings about their present way of life were analyzed for use in this study.

Interviewers wrote out subjects' responses to the open-ended questions. Two undergraduate research assistants read the responses to the six questions that were analyzed for each subject and wrote down condensed versions of the responses (i.e., wandering conversations or stories conveyed by the subjects that were not pertinent to that question were not used in the analyses). Three different judges independently read the condensed versions of each response and placed the responses into previously undefined categories that they perceived as having a common theme or definition. Then the three judges compared their categories for similar themes and the responses placed in each. An analysis of the responses placed in each category by each judge was done after it was discovered that each judge had similar thematic categories. When two of the three judges agreed that a certain response should be in a category, that response was then placed in that category and the category was then named (see Appendix B for

the response categories for each question and sample responses).

Demographic Information Information on the age of the teen, socioeconomic status of the family of origin as measured by Hollingshead (1975), the relationship with the father of the baby (for parenting teens only), completed education levels of teens and parents, and marital status of teens and parents also were gathered from each subject.

Scoring Procedure

Items on the paper and pencil questionnaires and on the open-ended responses were coded so that a higher score reflected a higher frequency or quality on that item. Item responses that were not able to be coded on a continuum (i.e., they were discrete variables) were recoded into dummy variables (0,1) so that analyses would be possible. Variables that were recoded into dummy variables were teens' and parents' marital status, race, and religious preference. The following open-ended responses were recoded into dummy variables: who made initiative to talk/visit (teen or mother); and what method of birth control did the teen use.

Procedure

The parenting teens (N = 56), who were tested twice previously in the "Pregnant and Parenting Adolescent" project,

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Procedure

The parenting teens (N = 56), who were tested twice previously in the "Pregnant and Parenting Adolescent" project,

teens' friend, not someone else's friend). The friends were administered the same instruments as were the parenting teens, with some previously noted question modifications; the same procedures were followed for administration of the questionnaires.

RESULTS

Comparison Analyses

T-tests were used to compare background characteristics, family environment dimensions, family dynamics, self esteem, and verbal ability of teen mothers and friends. All t-tests were conducted as independent t-tests rather than paired t-tests because sample sizes were different between groups. Conducting independent t-tests resulted in all completed data for that item to be analyzed, rather than only analyzing data for those teens who had a match (i.e., a parenting teen with her best friend).

Table 1 shows that nonpregnant/nonparenting friends differed significantly from teen mothers in that they were older ($t = -2.06$, $p < .05$), had more education ($t = -3.08$, $p < .01$), had a higher grade point average ($t = -2.59$, $p < .05$), and received financial aid from more sources than teen mothers ($t = -2.05$, $p < .05$) (Table 1). Furthermore, Table 1 shows that although the parenting teens' mothers were younger at the birth of their first babies ($M = 19.15$) than friends' mothers ($M = 20.89$), the ages were not significantly different ($t = -1.99$, n.s.).

Table 2 shows that friends were more apt to be single ($t = -2.45$, $p < .05$), to attend church on a regular basis ($t = 2.06$, $p < .05$), and to be raised in intact families ($t = 2.74$, $p < .01$). No significant differences were found between the

two groups on parents' educational levels or on teen's religion preference (Table 2).

Table 4 presents differences found between the two groups on one of ten subscales of the Moos Family Environment Scale and on one of two factors on the Family Dynamics Questionnaire. Friends scored significantly higher on Active-Recreational Orientation (Moos FES) than teen mothers (t = -2.18, p < .05). Table 5 shows friends also scored significantly higher than teen mothers on the FDQ Togetherness factor suggesting that their families participated more often in activities together (t = -2.75, p < .01) (Table 5). However, there were no significant differences between the two groups on the FDQ Dysfunction factor. Teen mothers had a higher total self esteem than friends (t = 2.88, p < .01). Contrary to predictions, Table 5 revealed that there were no significant differences found between groups on verbal ability (t = -.24, n.s.).

Individual item means on the Family Dynamics Questionnaire (FDQ) were compared for teen mothers and friends (Table 6). The FDQ was concerned with the dynamics in a family unit; thus, results may reflect the occurrence of a behavior in any one family member or in several. Friends were significantly more apt than parenting teens to have family members who: worked while in high school (t = -2.93, p < .01), 2); participated in extracurricular activities (t = -3.04, p <

.01); 3) attended siblings' functions together (t = -2.42, p < .05); and spent time with friends (t = -2.44, p < .05). The two groups did not differ on the other 21 FDQ items. In fact, parenting teens and friends had the same mean on item responses concerning physical, alcohol, and sexual abuse.

T-tests revealed significant differences between the groups for several of the open-ended question responses (Table 7). Questions concerning the teens' lives two years ago showed that the nonpregnant/nonparenting friends had friendships of longer duration (i.e., two years or more) than parenting teens (t = -4.21, p < .01); friends were more apt than parenting teens to have close friends who had been pregnant at that point in time (t = -2.51, p < .05). Furthermore, friends stated that they were influenced by their friends not to get pregnant (t = -4.58, p < .01). Friends were less likely to entertain wishes of becoming a teen mother, whereas parenting teens were more apt to entertain wishes of becoming a young parent before they actually became pregnant (t = -2.99, p < .01).

Friends were more likely than parenting teens to report using birth control (t = 5.91, p < .01). However, friends were asked to report their birth control usage for the time period when the interview was conducted; parenting teens were asked to report usage for the time period when they became pregnant. Therefore, caution should be taken when

interpreting these results. Friends stated that when they did use birth control, they did not use it any more consistently than did parenting teens (t = 1.58, n.s.). For teens who were using contraceptives, there were no significant differences between the two groups in the method used. No significant differences between parenting teens and friends were revealed when examining categorical response levels corresponding to how the teen perceives her relationship with her mother; however, when comparing mean scores for the responses to the question, friends had significantly better relationships with their mothers than did parenting teens (t = -2.29, $p < .05$).

Percentages for each response category to the open-ended question "As you look back over the years and your own childhood, how would you compare the ways in which you will raise your children with the ways in which your mother raised you? What will be similar? What will be different?" are shown in Table 8. Family milieu, discipline, childrearing values, parental control, affect/emotional involvement, religion, material resources, expectations, and interaction patterns emerged as thematic categories which teens stated they would choose childrearing practices either similar or different from their parents' practices.

Table 9 shows percentages for each response category to open-ended questions "What makes you feel good about your situation? What makes you feel bad about your situation?"

After judges examined teens' responses, 10 thematic categories emerged which encompassed the good and bad aspects of their situations. Aspects included motherhood, autonomy, education, living situation, social support, partner relationship, psychosocial, parent/child relationship, financial, and work commitment.

Correlational Analyses

Pearson product-moment correlations were computed to explore associations among background characteristics, self esteem, verbal ability, Moos FES subscales, and FDQ factors for teen mothers (Table 10) and nonpregnant/nonparenting friends (Table 11) separately. All significant correlations are not presented in the text; significant correlations considered meaningful and important are presented.

Older teen mothers had significantly higher self esteem scores (r = .39, p < .01), higher verbal ability (r = .29, p < .01), were more educated (r = .66, p < .01), more likely to be employed (r = .29, p < .05), and had a higher annual income (r = .42, p < .05), than younger teen mothers (Table 10). Education correlated positively with self esteem (r = .39, p < .01), grade point average (r = .50, p < .01), verbal ability (r = .44, p < .01), and employment for teen mothers (r = .32, p < .05). Parenting teens' employment was positively correlated with the number of financial aid sources (r = .43,

$p < .01$), and annual income ($r = .36$, $p < .05$). Employed mothers were more likely to come from families with higher achievement orientations ($r = .40$, $p < .01$) and lower levels of conflict between family members ($r = -.29$, $p < .05$). Occupational levels for the teen's mother and the teen's father were correlated significantly ($r = .39$, $p < .01$). Furthermore, occupational level for each parent was associated positively with achievement orientation in the family ($r = .31$, $p < .05$; for each parent separately). Self esteem scores for teen mothers were significantly and positively related to family togetherness ($r = .31$, $p < .05$).

As with teen mothers, for nonpregnant/nonparenting friends, older teens had higher self esteem ($r = .39$, $p < .05$) (Table 11). Higher educated friends had higher GPAs ($r = .50$, $p < .01$), and verbal ability scores ($r = .62$, $p < .01$); those friends who attended church most frequently were reared in families with stronger moral-religious emphasis ($r = .51$, $p < .01$). Friends who were employed had higher self esteem ($r = .40$, $p < .05$); yet, friends whose mothers had high occupational levels had lower self esteem than did friends whose mothers who were not working or were at lower occupational levels ($r = -.41$, $p < .05$). Interestingly, friends whose fathers had achieved a high occupational level had family backgrounds relatively low in expressiveness ($r = -.44$, $p < .05$), higher in moral-religious emphasis ($r = .41$, $p <$

.05), and higher in control (r = .57, p <.01). Nonpregnant/ nonparenting friends who had higher self esteem tended to be reared in families with higher cohesion (r = .47, p <.05), higher expressiveness (r = .69, p < .01), and lower control (r = -.41, p < .05).

Correlations between the Moos Family Environment Scale and the Family Dynamics Questionnaire are shown in Table 12. The Togetherness factor of the FDQ and six of the 10 subscales of the Moos FES were significantly correlated. Togetherness was positively associated with the following Moos FES subscales: Cohesion, Expressiveness, Intellectual-Cultural Orientation, Active-Recreational Orientation, and Moral-Religious Emphasis subscales. As expected, Togetherness was negatively associated with the Conflict subscale. Higher scores on the Dysfunction factor, representing low dysfunction in the family, were significantly correlated with higher cohesion, expressiveness, intellectual-cultural orientation, and active-recreational orientation (FES subscales). Additionally, lower levels of dysfunction in the family was significantly correlated with higher levels of family conflict and control (FES subscales).

Correlations between subscales on the Moos Family Environment Scale showed that several subscales were significantly intercorrelated for subjects in the present study (Table 13).

Regression Analysis

A regression analysis, using the backward elimination procedure, was conducted to predict teen pregnancy (Table 14). Variables related to background information, Moos FES subscales, FDQ factors, self esteem, and verbal ability were entered into the equation. The teens' education, self esteem, teens' mother's age at the birth of her first baby, and family cohesion contributed significantly to the model ($F = 11.93$, $p < .0001$), accounting for 67% of the variance. Pregnancy was predicted by lower education levels, higher self esteem, lower levels of family cohesion, and having a younger mother at the birth of her first baby. Other appropriate regression analyses procedures that may result in different predictor variables contributing significantly to the regression model include the logistic, probit, and discriminate regression analyses.

DISCUSSION

The major purpose of this study was to investigate the family background and milieu of parenting teens and a comparison group of nonpregnant/nonparenting friends in order to explore potential factors contributing to teen pregnancy. Specifically, the family environments, background characteristics, self esteem, and verbal ability of teen mothers and nonpregnant/nonparenting friends were compared to examine the factors that may lead to early parenting.

Teen mothers and friends differed in several aspects of their lives. Friends were more apt than teen mothers to have completed high school and started college. As suggested in previous studies (Adams et al., 1987; Roosa, 1986), the teen mothers in this study may have been at risk for dropping out of high school prior to becoming pregnant, thus leading to lower educational attainment. Over 50% of the teen mothers in this study had not completed high school, yet their average age was 18.5 years. Contrary to previous research findings (Held, 1981), teen mothers and friends in this study did not have significantly different intellectual abilities, as measured by verbal ability. Therefore, one cannot conclude that teen mothers had lower education levels than friends because of lower abilities. Other variables, such as parents' support and involvement in school functions or of teens'

participation in extracurricular activities, may influence or reflect the teens' motivation in the educational system.

Although a high percentage of teen mothers (80%) and friends (96%) were single, teen mothers were much more likely than friends to be either currently or previously married (20% versus 4%). Hayes (1987) suggests that marriage is not perceived, as it was in the past, as a necessary consequence of becoming pregnant. Thus, teen marriage rates are decreasing; consequently, out-of-wedlock births are increasing.

The finding that teen mothers were less likely than friends to have been reared in an intact home is supported by previous research (Elkes & Crocitto, 1987; Ulvedal & Feeg, 1983). However, research suggesting that teen pregnancy is intergenerational (Ulvedal & Feeg, 1983) was not supported in the present study; no significant differences were found between groups for the teen's mother's age at the birth of her first baby. Being reared in a home where teen pregnancy is accepted and supported may affect the teen's decision to carry the baby to term; however, in this study having two parents present in the home had a greater influence on whether a teen became pregnant.

Although no differences were found in religious preferences (i.e., Catholic, Protestant, Fundamental Protestant, or other) between groups, teen mothers attended

church on a less regular basis than did friends. Past research has found church attendance is related to reduced sexual activity (Zelnik, Kantner, & Ford, 1981). In this study, friends tended to have nonsignificantly stronger moral-religious emphasis in their families. One could conclude that a family which emphasizes morals and teaches values about sexual activity and birth control also emphasizes religion and its practice.

Strong evidence for differences in family environments between the two groups was not found. Of the ten subscales of the Moos Family Environment Scale, significant differences between teen mothers and friends were found on the Active-Recreational Orientation subscale only; friends were significantly higher on this scale suggesting that their families put a high emphasis on participation in social and recreational activities (as defined by Moos).

Friends scored significantly higher on the Togetherness factor of the Family Dynamics Questionnaire, suggesting that their families placed an emphasis on participating in activities that enriched their environments. Involvement in family life was shown through attendance at sibling functions; support of family members' group involvement was demonstrated through an emphasis on participation in extracurricular activities, working while in high school, and spending time with friends. The Active-Recreational Orientation subscale

and Togetherness factor were significantly correlated; thus significant differences found between groups in the FES factor lends support to those differences found on the FDQ subscale.

Self esteem for teen mothers was significantly higher than self esteem for nonpregnant/nonparenting friends. This finding supports the findings of Crase and Stockdale (1989); pregnant/parenting teens had higher self esteem scores than a comparable group of nonpregnant/nonparenting teens. The authors had speculated that the event of the pregnancy and the support surrounding it may have contributed to higher self esteem. Yet, Streetman (1987) found no differences in self esteem between parenting teens and nonpregnant/ nonparenting teens. Therefore, no firm conclusions can be made concerning self esteem in this study.

Higher self esteem in parenting teens is significantly related to a higher feeling of Togetherness (FDQ). This finding suggests that family support in the teen's activities and group involvement leads to higher self esteem. This result supports Streetman's (1987) suggestion that examination of the effects of social interaction and group membership (both aspects are assessed in the FDQ Togetherness factor) on self esteem is important.

For friends, higher self esteem is related to lower levels of family Control and higher levels of family Cohesion and Expressiveness. It appears that lower levels of Control

in the family allow members to be more expressive of their feelings and opinions; this freedom may lead members to feel better about themselves and thus help generate higher self esteem. A higher level of Cohesion, symbolizing support and commitment of family members, also may lead teens to feel good about themselves and their role in the family.

Significant correlations between the Moos Family Environment Scale subscales and the Family Dynamics Questionnaire factors lend validity to the FDQ and credence to its further development and use. Whereas the FDQ assesses several of the same dimensions as the FES, the FES does not assess any occurrences of abuse happening in the family; therefore not only did the FDQ complement the FES, it also revealed additional family environment dimensions occurring in the teens' families.

In regard to predicting teen pregnancy, several variables contributed significantly to the regression model, accounting for 67% of the variance. Lower educational levels, higher self esteem, lower levels of family Cohesion, and teens having mothers who were younger at the first baby's birth were found to be predictive of teen pregnancy. Lower educational levels in pregnant/parenting teens has been found in past research (Goldfarb, Mumford, Schum, Smith, Flowers, & Schum, 1977). Goldfarb et al. (1977) found that the combined effect of being reared in a needy, large family, receiving sex education late

and from a friend, and performing poorly in school causes a teen to be thousands of times more susceptible to pregnancy. While feelings of support and commitment to other family members (i.e., Cohesion) are missing in pregnant teens' families (Landy et al., 1983), pregnant teens often times express a desire for more cohesion in their families (Geber & Resnick, 1988). Thus, a model that includes both background characteristics and family variables was predictive of teen pregnancy in the present study.

Comparison analyses of the open-ended responses revealed some interesting results. Nonpregnant/nonparenting friends were significantly more likely than parenting teens to maintain their friendships over time. It might be speculated on the basis of comments noted during the interview that a difference in life styles (i.e., becoming a parent) and previous commonalties, such as going to bars together, presented a problem in their friendships, which resulted in their friendships changing. Looking back two years, nonpregnant/nonparenting friends had more friends who were pregnant at that time than parenting teens did. However, it should be recalled that being a friend to a parenting teen was the criterion for their inclusion in this study!

Over half of the nonpregnant/nonparenting friends stated that their friends had an influence on their not becoming pregnant; only 7% of parenting teens stated that their friends

were an influence on them becoming pregnant. Comments made from the nonpregnant/nonparenting friends suggested that an important factor in their decision to avoid early pregnancy was not wanting the responsibilities and financial problems that their parenting friends had. Therefore, the knowledge of a parenting teen's life seems to be an incentive for nonpregnant/nonparenting teens not to take risks sexually.

Nonpregnant/nonparenting friends had stronger feelings than parenting teens about not wanting to be young parents. This was reinforced by the finding that 70% of friends were using birth control at the present time; only 21% of teen mothers used birth control in the time period when they became pregnant. This finding should be treated with caution due to the fact that the question was asked about two different time periods, approximately two years different. Only seven percent of each teen group using birth control stated that they did not use birth control every time they engaged in sexual activity; there also were no differences between groups on the type of birth control used.

This finding that a majority of friends use birth control supports past research that 27% of sexually active teens never use birth control; however, it does not support findings that only 39% of sexually active teens using birth control did not use it consistently (Zelnik & Kantner, 1980). Research also shows that among those teens who never used birth control, 39%

became pregnant within 6 months of sexual activity; 67% of the non-users became pregnant within two years after the initial sexual encounter (Zabin, Kantner, & Zelnik, 1981). In addition, the younger the teen, the less apt she was to use contraceptives; thus, those teens under 15 years of age are twice as likely to become pregnant in the first 6 months of sexual activity than were teens who are 18-19 years old (Zabin et al., 1981). The teen mothers in the current study are significantly younger than the nonpregnant/nonparenting friends, suggesting that the friends' use of birth control could be due to an age effect.

Subjects were asked to differentiate the way in which they were reared and the way they will rear their children. Three judges placed responses into categories that were similar in theme. Family milieu, discipline, childrearing values, parental control, affect/emotional involvement, religion, material resources, expectations, and interaction patterns were mentioned by many teen mothers and friends as areas where they reported expected similarities or differences to occur. Examples of teens' responses are found in Appendix B.

Similarly, three judges examined responses to the open-ended question concerning aspects of the teen's status (parenting versus nonpregnant/nonparenting) that made them feel good or bad. Categorical themes that emerged in the

responses were: motherhood, autonomy, education, living situation, social support, partner relationship, psychosocial, parent/child relationship, financial, and work commitment. Examples of teens' responses are in Appendix B.

Limitations of this study should warrant caution in interpreting the results and implications. First, although the subjects were mostly white, which is representative of the region where the study was done, caution should be taken when applying the findings to teen mothers of different races. Second, the significance of results may have been different if the sample sizes had been more equal between parenting groups and nonpregnant/nonparenting groups of friends. Correlations were modest in size; due to the large number of correlations analyzed some associations may have occurred by chance. Furthermore, the fact that this study relied on a nonrandom voluntary sample might influence the results. Finally, information was gathered through self-report instruments and thus was subject to bias. On the other hand, how the teen perceives her environment may be as important, if not more important, than the actual characteristics of the environment.

In summary, major conclusions from the study are that parental reinforcement of school involvement and achievement, in addition to support of teen's participation and involvement in group activities, may help prevent teen pregnancy. Differences found between groups suggest that an emphasis on

finishing high school and seeking higher education or employment also may be important in reducing the potential of teen pregnancy. Furthermore, the influential power of friendships concerning sexual practices has important implications. Teens' parents showing an active interest with who their teen associates, may help reduce the possibility of early childbearing. Lastly, a predictive model of teen pregnancy includes both personal and family variables.

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APPENDIX A: TABLES FOR PAPER 2

Table 1. Means, standard deviations, and t-scores for background characteristics of teen mothers and friends[a]

Characteristic[b]	Mean	SD	t
Age[c]	18.5 19.4	1.4 2.0	-2.06*
Age at birth of baby	16.78 N/A	1.3	
Babies' fathers' age at birth of baby	20.0 N/A	3.4	
Babies' age in months	19.5 N/A	10.80	
GPA (self-report, 4.0 scale)	2.61 3.04	.74 .56	-2.59*
No. of financial aids sources[c]	1.8 2.4	.86 1.03	-2.05*
Teens' mothers' age at the birth of her first baby	19.15 20.89	2.16 4.08	-1.99

a The first mean and SD is for teen mothers, the second is for friends.

b Unless noted, all characteristics refer to the teen mothers and friends.

c Separate variance estimates, versus pooled variance estimates, were used for these characteristics.

*$p<.05$.

**$p<.01$.

Table 2. Percentages and t-scores on means of background characteristics of teen mothers and friends

Characteristic[a]		Teen Mothers	Friends	t
Family of origin structure	intact	36%	67%	2.74**
	nonintact	64%	33%	
Teens' fathers' education	<h.s. grad	25%	19%	.74
	h.s. grad	36%	44%	- .65
	>h.s. grad	29%	28%	.00
Teens' mothers' education	<h.s. grad	15%	15%	.07
	h.s. grad	36%	44%	- .51
	>h.s. grad	43%	41%	.45
Education	<h.s. grad	54%	26%	2.51*
	h.s. grad	30%	26%	.46
	>h.s. grad[b]	14%	48%	-3.08**
Race	white	82%	89%	- .79
	black	9%	7%	.23
	other[b]	9%	4%	.98
Marital status	single[b]	80%	96%	-2.45*
	married[b]	16%	4%	2.00*
	other	4%	0%	
Religion	Catholic	29%	37%	- .61
	Protestant	32%	37%	- .27
	Fund. Prot.	14%	7%	.98
	other	20%	18%	.23
Church attendance	almost never	55%	33%	2.06*
	once a month	14%	30%	-1.65
	twice a month[b]	5%	15%	-1.24
	once a week	16%	15%	.18

[a] Unless noted, all characteristics refer to the teen mothers and friends.

[b] Separate variance estimates, versus pooled variance estimates, were used for these characteristics.

*$p<.05$.

**$p<.01$.

Table 3. Family Dynamics Questionnaire factor items and loadings

Item No.	Item Content	Loading
	TOGETHERNESS FACTOR	
1	Spent special times together	.57
2	Participated in family actities together	.58
3	Vacationing together	.49
5	Had help with homework	.44
9	Participated in extracurricular activities	.37
10	Attended siblings' functions together	.57
12	Read in leisure time	.31
13	Had chores to do	.45
19	Close relationship with grandparents	.41
20	Spent time with friends	.40
22	Parents spent time with friends	.43
24	Parent belonged to clubs	.58
	DYSFUNCTION FACTOR	
4	Physical violence	.53
6	Prescription drug abuse	.38
8	Alcohol abuse	.51
11	Arrested or in jail	.31
14	Angry yelling from parents	.73
15	Illegal drug use	.51
16	Spent a lot of time without adult present	.28
17	Sexual abuse	.27
21	Parents used inconsistent discipline	.34
23	Parents argue with each other	.57
25	One parent makes important decisions alone	.38

Table 4. Means, standard deviations, and t-scores on the FES Subscales[a]

FES Subscale	Mean	SD	t
Cohesion	43.41	20.18	-1.50
	50.52	20.19	
Expressiveness	47.88	15.23	- .57
	49.89	14.68	
Conflict	52.71	13.36	.48
	51.19	14.14	
Independence	47.82	12.93	- .44
	49.19	13.92	
Achievement Orientation	52.18	10.69	-1.01
	54.56	8.42	
Intellectual-Cultural Orientation	40.77	12.81	-1.24
	44.56	13.44	
Active-Recreational Orientation	46.84	11.73	-2.18*
	52.59	10.29	
Moral-Religious Emphasis	47.75	9.88	-1.04
	50.37	12.47	
Organization	47.71	13.25	-1.68
	52.67	10.92	
Control	49.30	12.61	- .81
	51.59	11.01	

[a] The first mean and SD is for teen mothers, the second is for friends.

*$p<.05$.

Table 5. Means, standard deviations, and t-scores on the FDQ factors, WAIS-R, and Rosenberg's Self-Esteem Scale[a]

Variable	Mean	SD	t
FDQ Togetherness	33.30	7.62	-2.75**
	37.93	6.11	
FDQ Dysfunction	43.36	5.78	- .98
	44.67	5.60	
WAIS-R	34.89	10.79	- .24
	35.52	12.26	
RSE	32.85	3.69	2.88**
	30.41	3.45	

Note. FDQ = Family Dynamics Questionnaire; WAIS-R = verbal ability on the Weschler Adult Intelligence Scale - Revised; RSE = Rosenberg Self Esteem Scale.

[a] The first mean and SD is for teen mothers, the second is for friends.

**$p<.01$.

Table 6. Means, standard deviations, and t-scores on FDQ items which were significant for teen mothers and friends[a]

Item Content	Mean	SD	t
Worked while in high school	2.36 3.26	1.33 1.29	-2.93**
Participated in extracurricular activities	2.41 3.33	1.22 1.44	-3.04**
Attended siblings' functions together	2.39 3.04	1.09 1.22	-2.42*
Spent time with friends	3.44 3.96	.97 .76	-2.44*

Note. FDQ = Family Dynamics Questionnaire.

[a] The first mean and SD is for teen mothers, the second is for friends.

*$p<.05$.

**$p<.01$.

Table 7. Percentages[a] and t-scores on means of open-ended questions for teen mothers and friends

Item Content		Teen Mothers	Friends	t
How teen gets along with her mother	terrible	7%	4%	.61
	not very well	14%	0%	
	sometimes	14%	11%	.40
	usually good	31%	29%	.07
	very well	34%	56%	-1.89
How frequently teen and mother talk/visit	hardly ever	5%	3%	.34
	few times/month	0%	4%	
	once a week	14%	19%	-.46
	few times/week	20%	15%	.56
	every day	59%	59%	.06
Who makes the initiative to talk/visit	mother	5%	0%	
	teen	9%	11%	-.23
	both	77%	85%	-.49
What teen and mother talk about	nothing	4%	4%	.10
	every day things	27%	18%	1.21
	personal problems	52%	74%	-1.21
How teen's relationship with mother has changed	much worse	2%	4%	-.47
	getting worse	5%	0%	
	no change	22%	15%	.71
	closer	64%	70%	-.54
	a lot closer	7%	11%	-.60
Does teen have same friends as 2 yrs. ago	no	25%	7%	2.26*
	best friend only	18%	0%	
	yes	57%	93%	-4.21**

[a] Due to missing data, some items do not equal 100%.

*$p<.05$.

**$p<.01$.

Table 7 (Continued)

Item Content		Teen Mothers	Friends	t
Did any of teen's friends have children	none	32%	0%	
	some(1-2)	25%	48%	-.99
	several(3-5)	7%	19%	-.95
	most(6-20)	5%	33%	-2.51*
Did friends influence teen to get/not get pregnant	no	82%	37%	-4.58**
	yes	7%	52%	
Did teen want to be pregnant	no	64%	93%	-2.99**
	ambivalent	22%	0%	
	yes	9%	7%	.30
Did teen use birth control(bc)	no	75%	15%	5.91**
	yes	21%	70%	
If used bc, what did teen use	pill	33%	53%	-.84
	condoms	42%	37%	.45
	pill & condom	8%	10%	-.12
	spermicial supp.	8%	0%	
If used bc, did teen use it every time	no	33%	10%	1.58
	yes	67%	90%	

Table 8. Percentages[a] for response categories on open-ended question for teen mothers and friends

Category[b]	Aspect	Teen mothers	Friends
Family Milieu	similar	7%	22%
	different	25%	26%
Discipline	similar	25%	48%
	different	27%	44%
Childrearing Values	similar	7%	19%
	different	18%	37%
Parental Control	similar	14%	11%
	different	41%	44%
Affect/Emotional Involvement	similar	14%	19%
	different	21%	33%
Religion	similar	4%	22%
	different	5%	7%
Material Resources	similar	0%	4%
	different	2%	11%
Expectations	similar	2%	4%
	different	0%	4%
Interaction Patterns	similar	21%	19%
	different	11%	22%

[a] Percentages do not equal 100% because subjects were not provided with categories in which to respond; they responded only to what was pertinent in their lives.

[b] Question reads as follows: "As you look back over the years, and your own childhood, how would you compare the ways in which you will raise you children with the ways in which your mother raised you? What will be similar? What will be different?"

Table 9. Percentages[a] for response categories on open-ended question for teen mothers and friends

Category[b]	Aspect	Teen Mothers	Friends
Motherhood	good	11%	19%
	bad	2%	7%
Autonomy	good	21%	63%
	bad	29%	4%
Education	good	27%	11%
	bad	13%	0%
Living Situation	good	14%	0%
	bad	13%	0%
Social Support	good	23%	4%
	bad	4%	0%
Partner Relationship	good	23%	22%
	bad	29%	0%
Psychosocial	good	43%	52%
	bad	9%	4%
Parent/Child Relationship	good	43%	4%
	bad	2%	4%
Financial	good	18%	11%
	bad	30%	0%
Work Commitment	good	13%	26%
	bad	0%	0%

[a] Percentages do not equal 100% because subjects were not provided with categories in which to respond; they responded only to what was pertinent to their current situation.

[b] Question reads as follows: "What makes you feel good about your situation? What makes you feel bad about your situation?"

Table 10. Means, standard deviations, and correlations among selected variables for parenting teens only

	1	2
1 Age	1.00	
2 Education	.66**	1.00
3 GPA	.22	.50**
4 Employed	.29*	.32*
5 No. of Financial Aid Sources	.07	.19
6 Annual Income	.42*	.31
7 Church Attendance	-.20	-.06
8 Parents' Marital Status	.10	-.11
9 Mothers' SES	-.00	-.02
10 Fathers' SES	-.05	-.10
11 Self Esteem	.39**	.39**
12 Verbal Ability (WAIS-R)	.29**	.44**
Moos Family Environment Scale Subscales:		
13 Cohesion	.13	.03
14 Expressiveness	-.01	-.04
15 Conflict	-.04	-.04
16 Independence	-.03	-.14
17 Achievement Orientation	.02	-.11
18 Intellectual-Cultural Orientation	.13	.03
19 Active-Recreational Orientation	.16	.18
20 Moral-Religious Emphasis	.07	.02
21 Organization	-.19	-.14
22 Control	.18	.21
Family Dynamics Questionnaire:		
23 Togetherness Factor	.19	.22
24 Dysfunction Factor	-.01	.03
Mean	18.54	3.53
SD	1.40	.84
N	56	55

*$p<.05$.

**$p<.01$.

Table 10 (Continued)

3	4	5	6	7	8	9
1.00						
.33*	1.00					
.23	.43**	1.00				
.33	.36*	.13	1.00			
-.11	-.27	.00	-.00	1.00		
-.03	-.17	-.08	-.17	-.03	1.00	
-.11	-.25	.27	.25	-.19	.04	1.00
-.10	.10	-.03	.07	-.02	.03	.39**
.04	.09	.17	.11	-.14	.25	.08
.23	-.08	.15	.05	.14	-.03	.22
-.11	.04	-.03	-.14	-.09	.09	-.01
-.17	-.05	.03	-.10	.03	.08	.04
.02	-.29*	-.06	.20	.11	.07	-.08
-.03	.15	.04	-.06	-.22	-.17	-.08
.04	.40**	.18	.03	-.02	.09	.31*
-.03	.19	.22	-.18	-.02	.06	-.01
-.04	.25	.32*	.05	-.09	-.13	.03
-.28	.11	.10	-.24	.17	.20	.18
-.04	.19	.02	-.33	-.08	-.02	.03
.20	.19	.05	.08	-.05	.06	.08
.03	.14	-.07	-.12	.01	.02	.13
-.12	.13	-.15	-.27	-.04	-.09	-.16
2.62	.34	1.80	8828	1.80	1.64	5.18
.74	.48	.86	6654	1.12	.48	1.69
46	56	56	32	51	56	51

Table 10 (Continued)

	10	11	12	13	14	15	16
10	1.00						
11	-.03	1.00					
12	.09	.22	1.00				
13	-.12	.20	.10	1.00			
14	-.03	.06	.23	.66**	1.00		
15	.14	-.12	.03	-.65**	-.46**	1.00	
16	-.09	.03	-.00	.21	.17	-.36**	1.00
17	.31*	-.06	-.13	-.21	-.06	.07	-.03
18	.01	.20	.20	.63**	.58**	-.49**	.16
19	-.15	.18	-.12	.49**	.39**	-.42**	.30*
20	-.06	.09	.18	.29*	.28*	-.26	.02
21	.17	-.13	-.10	.34**	.15	-.46**	.12
22	.11	-.05	-.04	-.25	-.40**	.22	-.34*
23	.07	.31*	.27*	.32*	.36**	-.40**	.20
24	-.16	.08	-.12	.48**	.40**	-.48	.22
Mean	4.36	32.85	34.89	43.41	47.88	52.71	47.82
SD	1.66	3.69	10.79	20.18	15.23	13.36	12.93
N	50	56	56	56	56	56	56

Table 10 (Continued)

17	18	19	20	21	22	23	24
1.00							
.10	1.00						
.04	.45**	1.00					
.21	.44**	.13	1.00				
.13	.32*	.21	.20	1.00			
.46**	-.01	-.13	.14	.14	1.00		
.10	.36**	.30*	.24	.13	-.10	1.00	
-.16	.32*	.34*	.05	.09	-.28*	.39**	1.00
52.18	40.77	46.84	47.75	47.71	49.30	33.30	43.36
10.69	12.81	11.73	9.88	13.25	12.61	7.62	5.78
56	56	56	56	56	56	56	56

Table 11. Correlations among selected variables for friends only

	1	2
1 Age	1.00	
2 Education	.71**	1.00
3 GPA	.25	.50**
4 Employed	.25	.25
5 No. of Financial Aid Sources	.15	.46*
6 Annual Income	-.15	-.54
7 Church Attendance	.22	.48*
8 Parents' Marital Status	-.31	-.31
9 Mother's SES	-.05	.11
10 Father's SES	.12	.26
11 Self Esteem	.39*	.16
12 Verbal Ability (WAIS-R)	.33	.62**
Moos Family Environment Scale Subscales:		
13 Cohesion	.23	.13
14 Expressiveness	.32	.27
15 Conflict	.14	.11
16 Independence	-.04	.07
17 Achievement Orientation	-.10	-.04
18 Intellectual-Cultural Orientation	.01	.09
19 Active-Recreational Orientation	-.05	.07
20 Moral-Religious Emphasis	.30	.49*
21 Organization	.00	-.06
22 Control	-.05	.09
Family Dynamics Questionnaire:		
23 Togetherness Factor	-.02	.22
24 Dysfunction Factor	.19	.24
Mean	19.41	4.30
SD	1.97	.95
N	27	27

*$p<.05$.

**$p<.01$.

Table 11 (Continued)

3	4	5	6	7	8	9
1.00						
.07	1.00					
.30	.14	1.00				
-.02	.58	.27	1.00			
.18	.15	.42*	-.87*	1.00		
-.03	.13	-.20	.36	-.08	1.00	
.04	.13	.27	-.65	.10	.23	1.00
.00	.19	-.09	-.66	.08	-.04	.18
.06	.40*	.10	.66	.10	-.16	-.41*
.60**	.27	.33	-.14	.32	-.05	.29
.23	.28	.37	.46	-.09	.10	.06
.32	.05	.08	.45	-.00	.06	-.17
.14	-.28	-.29	-.30	-.02	-.19	-.24
-.04	-.20	.12	-.08	.14	.27	.19
-.10	-.00	-.29	-.14	.21	.29	-.06
.01	.29	.46*	.11	.15	.15	.46*
-.05	.32	.42*	.83*	-.13	.31	.07
.30	.12	.36	-.41	.51**	-.19	.12
.00	.10	.03	.34	-.31	.21	.24
-.05	-.00	.08	.06	.33	-.18	.12
-.02	.20	.62**	.21	.10	-.16	.30
.19	.28	.50**	.31	.17	-.09	.21
30.41	.82	2.37	10281	2.12	1.33	4.82
.58	.40	1.31	3996	1.09	.48	1.59
27	27	27	7	25	27	27

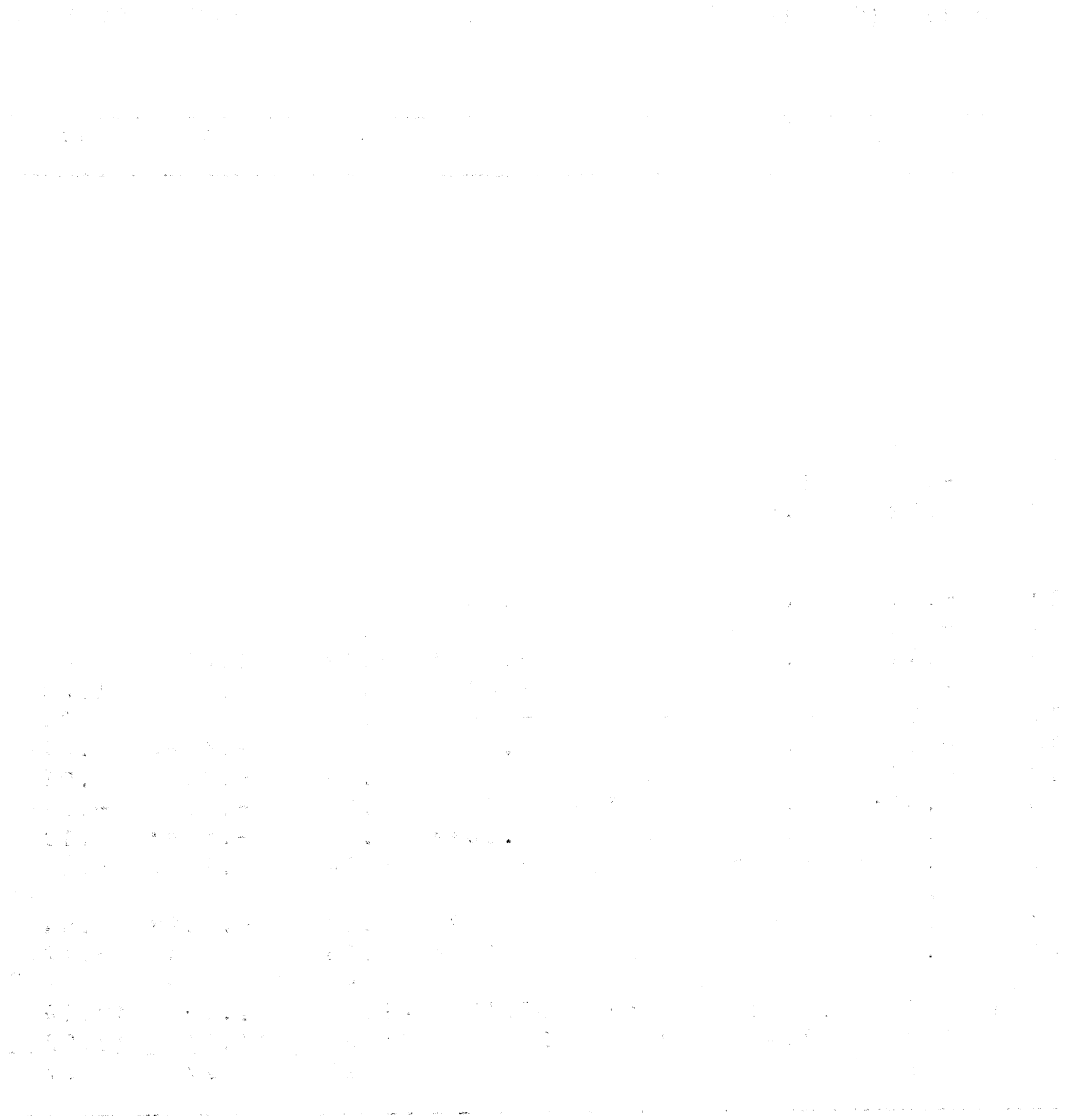

Table 11 (Continued)

	10	11	12	13	14	15	16
10	1.00						
11	-.30	1.00					
12	.22	.03	1.00				
13	-.21	.47*	-.05	1.00			
14	-.44*	.69**	.10	.61**	1.00		
15	.11	-.09	.20	-.75**	-.17	1.00	
16	-.28	-.14	-.08	-.07	.16	.12	1.00
17	.16	-.26	-.16	-.06	.11	-.02	.28
18	-.07	.05	.29	.50**	.14	-.45*	.07
19	-.06	.26	.26	.55**	.38	-.33	.06
20	.41*	.03	.35	.29	.04	-.25	-.07
21	.02	-.03	-.20	.50**	.23	-.52**	.13
22	.57**	-.41*	.23	-.34	-.64**	.12	-.14
23	.08	.03	.15	.46*	.07	-.53**	.04
24	-.17	.27	.20	.70**	.39*	-.72**	-.12
Mean	4.78	30.41	35.52	50.52	49.89	51.19	49.19
SD	1.97	3.45	12.26	20.19	14.68	14.14	13.92
N	27	27	27	27	27	27	27

Table 11 (Continued)

17	18	19	20	21	22	23	24
1.00							
-.08	1.00						
-.04	.50**	1.00					
-.21	.46*	.22	1.00				
.19	.01	.29	.07	1.00			
.07	-.10	-.12	.44*	-.10	1.00		
-.06	.46*	.48*	.43*	.31	.09	1.00	
-.08	.38	.37	.29	.35	-.10	.39*	1.00
54.56	44.56	52.59	50.37	52.67	51.59	37.93	44.67
8.42	13.44	10.29	12.47	10.92	11.01	6.11	5.60
27	27	27	27	27	27	27	27

Table 12. Correlations among Family Dynamics Questionnaire (FDQ) factors and Family Environment Scale (FES) subscales

Moos subscale	FDQ Togetherness	FDQ Dysfunction
Cohesion	.38**	.56**
Expressiveness	.29**	.40**
Conflict	-.43**	-.56**
Independence	.16	.12
Achievement Orientation	.09	-.12
Intellectual-Cultural Orientation	.41**	.35**
Active-Recreational Orientation	.39**	.36**
Moral-Religious Emphasis	.31**	.15
Organization	.21	.18
Control	-.02	-.22*

*$p<.05$.

**$p<.01$.

Table 13. Correlations among Moos Family Environment Scale subscales for subjects in this study

Subscale	1	2	3
Cohesion	1.00		
Expressiveness	.64**	1.00	
Conflict	-.68**	-.37**	1.00
Independence	.12	.17	-.19
Achievement Orientation	-.14	-.01	.04
Intellectual-Cultural Orientation	.60**	.44**	-.48**
Active-Recreational Orientation	.52**	.39**	-.39**
Moral-Religious Emphasis	.30**	.20	-.26*
Organization	.41**	.18	-.48**
Control	-.26*	-.46**	.18

*$p<.05$.

**$p<.01$.

Table 13 (Continued)

4	5	6	7	8	9	10
1.00						
.06	1.00					
.14	.06	1.00				
.23*	.05	.48**	1.00			
-.01	.22*	.45**	.18	1.00		
.13	.16	.25*	.26*	.17	1.00	
-.27*	.37*	.03	-.10	.25*	.97	1.00

Table 14. Regression analysis for relations between background variables and family environment dimensions and pregnancy.

Variable	Beta	SE B	T
Education	.46	.05	4.74**
Self esteem	-.34	.01	-3.56**
Teens' mother's age at birth of first baby	.25	.01	2.53*
Active-Recreational Orientation (FES)	.20	.01	1.81
Togetherness (FDQ)	.18	.01	1.74
Dysfunction (FDQ)	-.26	.01	-2.00
Cohesion (FES)	.33	.00	2.19*

*$p<.05$.

**$p<.01$.

APPENDIX B: CATEGORY DEFINITIONS AND EXAMPLES OF INTERVIEW RESPONSES

AS YOU LOOK BACK OVER THE YEARS, AND YOUR OWN CHILDHOOD, HOW WOULD YOU COMPARE THE WAYS IN WHICH YOU ARE RAISING (WILL RAISE) YOUR CHILDREN WITH THE WAYS IN WHICH YOUR MOTHER RAISED YOU? WHAT SPECIFIC SIMILARITIES DO YOU SEE? WHAT DIFFERENCES DO YOU SEE?

1. **Family Milieu:** Refers to characteristics of the family environment that are either beneficial or detrimental to the family as a whole.

   Examples: parents who fought
   stable family
   not a drunk father
   mom works later in life
   different priorities (i.e. will not put work first)

2. **Discipline**: Refers to discipline techniques used or not used by parents. Examples include verbal and physical punishment in addition to rewards.

   Examples: will use time out
   will not hit kids
   provide more discipline
   no spankings
   will not yell at kids

3. **Childrearing Values**: Refers to parental values of ways to raise children. Examples also include values that the parent passes on to the child such as using proper manners.

   Examples: will let friends come over
   raise daughter to make something of herself
   teach independence
   treat kids equally
   no alcohol around kids

4. **Parental Control**: Refers to limits and structure imposed by the parent.

   Examples: not as strict
   more consistent
   more limits
   will spoil child
   be more democratic

5. **Affect/Emotional Involvement**: Refers to the levels of parental affection, attention, support, encouragement, approval, and involvement in the child's life.

   Examples: be there for child
   give love and approval
   be supportive
   tell child that you love them
   spend more time with kids

6. **Religion**: Refers either to the child's involvement or noninvolvement in a religion.

   Examples: church present
   not so much church
   go to parochial school

7. **Material Resources**: Refers to the family having enough resources to provide necessities and/or material desires.

   Example: always have food, house, clothes
   give kids more material things
   have more money

8. **Expectations**: Refers to rules set by the parents for the child to follow in addition to standards such as curfews and chores.

   Examples: will have allowances
   no makeup until 14
   curfews

9. **Interaction Patterns**: Refers to communication and behavioral patterns of family members.

   Examples: be more open with kids
   I'll be both parent and friend
   read to child
   play with kids
   do family things together

WHAT MAKES YOU FEEL GOOD ABOUT YOUR SITUATION? WHAT MAKES YOU FEEL BAD ABOUT YOUR SITUATION?

1. **Motherhood**: Refers to the individual's values and feelings regarding the role of being a mother.

   Examples: happy to be a mom
   brought life into the world
   too selfish to be a mom
   if older then will be better parent
   young parent like her mom and therefore can be friends with child

2. **Autonomy**: Refers to the amount of the individual's freedom and responsibility as a result of their lifestyle.

   Examples: waking up at 4 in the morning
   no time for self
   likes being independent
   has to find sitter to do little things
   wants freedom
   no responsibility

3. **Education**: Refers to the individual's goals and values regarding educational achievement.

   Examples: feels good she can stay in school
   graduated
   gave up plans for high school and college
   wants to finish school

4. **Living Situation**: Refers to the individual's place of residence and feelings regarding her habitation.

   Examples: on own
   doesn't have own place
   since moved out of house, she feels better about herself
   no safe place for her child to play or grow up
   living with parents is inconvenient and stressful

5. **Social Support**: Refers to perceived levels of support the individual receives from her environment.

   Examples: support from family
   can sit with adults at family gatherings
   regret having no father figure in her life
   good friends
   church

6. **Partner Relationship**: Refers to the qualitative and quantitative aspects of the individual's relationship with the boyfriend, husband, or baby's father.

   Examples: we didn't get married
   wants to avoid baby's father who is in prison
   still with boyfriend
   nothing to do with father of baby
   no support from baby's father
   husband is gone a lot

7. **Psychosocial**: Refers to the aspects of social and emotional experiences with implications for personal development.

   Examples: making it on her own
   changed from trouble maker to having responsibilities
   relate better to people and family because grown up
   fear of not making it
   good about herself
   wish more grown up

8. **Parent/Child Relationship**: Refers to the involvement, caring, and affective components of being a parent.

   Examples: seeing her child smile
   child is light of her life
   baby is cute and challenging which gives her strength
   can take care of baby
   bond with child
   has a child who is hers

9. **Financial**: Refers to an individual's concerns about money.

   Examples: off of welfare
   grateful for medical card for her child
   doesn't make enough money
   on ADC
   no money to raise children now
   wants material things

10. **Work Commitment**: Refers to career and job aspirations.

   Examples: kept her working through high school
   kids would get in her way of her career
   career already started
   opportunity for broader future

IDIX C: CODING MAP FOR QUESTIONNAIRES

CODING MAP FOR QUESTIONNAIRES

VARIABLE NAME	VARIABLE DESCRIPTION	VALUE LABEL
AGE	SUBJECT'S AGE	AGE IN YEARS
ED	SUBJECT'S EDUCATION LEVEL	1 = LESS THAN SEVENTH GRADE 2 = JUNIOR HIGH SCHOOL 3 = PARTIAL HIGH SCHOOL 4 = HIGH SCHOOL GRADUATE 5 = PARTIAL COLLEGE OR SPECIALIZED TRAINING 6 = STANDARD COLLEGE OR UNIVERSITY GRADUATION 7 = GRADUATE PROFESSIONAL TRAINING
GPA	SUBJECT'S GRADE POINT AVERAGE	0.00-4.00 POINTS
MS	SUBJECT'S MARITAL STATUS	1 = SINGLE 2 = MARRIED 3 = DIVORCED 4 = SEPARATED 5 = WIDOWED
RACE	SUBJECT'S RACE	1 = WHITE 2 = HISPANIC 3 = BLACK 4 = ORIENTAL 5 = NATIVE AMERICAN 6 = OTHER
JOB	DOES SUBJECT HAVE A JOB AT PRESENT TIME	0 = NO 1 = YES

VARIABLE NAME	VARIABLE DESCRIPTION	VALUE LABEL
HRSWKD	HOW MANY HOURS PER WEEK DOES SUBJECT WORK AT JOB	ACTUAL HOURS
JOBTITL	SUBJECT'S JOB TITLE ACCORDING TO HOLLINGSHEAD SES SCALE	01 = JANITORS 02 = COOKS 03 = TRUCK DRIVERS 04 = CARPENTERS 05 = CLERKS 06 = SECRETARIES 07 = MANAGERS 08 = ACCOUNTANTS 09 = DOCTORS 88 = NOT APPLICABLE 99 = MISSING DATA

SOURCES OF FINANCIAL SUPPORT INCLUDE...

TJOB	SUBJECT'S JOB	0 = NO 1 = YES
SJOB	SPOUSE'S JOB	0 = NO 1 = YES
SAV	SAVINGS	0 = NO 1 = YES
LOAN	LOANS	0 = NO 1 = YES
SCHOLAR	SCHOLARSHIPS	0 = NO 1 = YES
ADC	MONEY FROM GOVERNMENT AGENCIES	0 = NO 1 = YES
PARENT	MONEY FROM PARENTS	0 = NO 1 = YES
BOYFR	MONEY FROM BOYFRIEND	0 = NO 1 = YES

VARIABLE NAME	VARIABLE DESCRIPTION	VALUE LABEL
OTHER	OTHER INCOME	0 = NO 1 = YES
TFINSUP	TOTAL NUMBER OF SOURCES OF FINANCIAL SUPPORT (RESPONSES ABOVE ADDED TOGETHER)	0-9
ANNINC	SUBJECT'S ANNUAL INCOME IF NOT LIVING WITH PARENTS	IN DOLLAR AMOUNTS
RELIG	SUBJECT'S RELIGIOUS PREFERENCE	1 = PROTESTANT 2 = FUNDAMENTAL PROTESTANT 3 = CATHOLIC 4 = JEWISH 5 = OTHER 6 = NONE
VERIFY	NAME OF CHURCH SUBJECT ATTENDS	0 = DOES NOT VERIFY ABOVE QUESTION 1 = DOES VERITY ABOVE QUESTION
ATTEND	HOW OFTEN SUBJECT ATTENDS CHURCH	1 = ONE TIME PER WEEK 2 = TWO TIMES PER MONTH 3 = ONE TIME PER MONTH 4 = ALMOST NEVER 5 = NOT APPLICABLE
EXTENT	EXTENT SUBJECT FOLLOWS CHURCH'S TEACHINGS IN ADDITION TO ATTENDING	0 = NOT APPLICABLE 1 = ALMOST NEVER 2 = NOT OFTEN 3 = SOMETIMES 4 = USUALLY 5 = ALMOST ALWAYS

VARIABLE NAME	VARIABLE DESCRIPTION	VALUE LABEL
MOMAGEBB	AGE OF SUBJECT'S MOTHER AT FIRST BABY'S BIRTH	AGE IN YEARS
MSMOM	CURRENT MARITAL STATUS OF SUBJECT'S MOTHER	1 = SINGLE 2 = SEPARATED 3 = DIVORCED 4 = DECEASED 5 = MARRIED 6 = WIDOWED 7 = REMARRIED 8 = OTHER
MSDAD	CURRENT MARITAL STATUS OF SUBJECT'S FATHER	1 = SINGLE 2 = SEPARATED 3 = DIVORCED 4 = DECEASED 5 = MARRIED 6 = WIDOWED 7 = REMARRIED 8 = OTHER
DADED	SUBJECT'S FATHER'S HIGHEST COMPLETED EDUCATION LEVEL	1 = GRADE SCHOOL 2 = JUNIOR HIGH SCHOOL 3 = SOME HIGH SCHOOL 4 = HIGH SCHOOL GRADUATE 5 = SOME COLLEGE OR TECHNICAL SCHOOL 6 = COLLEGE GRADUATE 7 = GRADUATE OR PROFESSIONAL DEGREE
MOMED	SUBJECT'S MOTHER'S HIGHEST COMPLETED EDUCATION LEVEL	1 = GRADE SCHOOL 2 = JUNIOR HIGH SCHOOL 3 = SOME HIGH SCHOOL 4 = HIGH SCHOOL GRADUATE 5 = SOME COLLEGE OR TECHNICAL SCHOOL 6 = COLLEGE GRADUATE 7 = GRADUATE OR PROFESSIONAL DEGREE

VARIABLE NAME	VARIABLE DESCRIPTION	VALUE LABEL
MOMJOB	SUBJECT'S MOTHER'S JOB TITLE ACCORDING TO HOLLINGSHEAD SES SCALE	01 = JANITORS 02 = COOKS 03 = TRUCK DRIVERS 04 = CARPENTERS 05 = CLERKS 06 = SECRETARIES 07 = MANAGERS 08 = ACCOUNTANTS 09 = DOCTORS 88 = NOT APPLICABLE 99 = MISSING
DADJOB	SUBJECT'S FATHER'S JOB TITLE ACCORDING TO HOLLINGSHEAD SES SCALE	01 = JANITORS 02 = COOKS 03 = TRUCK DRIVERS 04 = CARPENTERS 05 = CLERKS 06 = SECRETARIES 07 = MANAGERS 08 = ACCOUNTANTS 09 = DOCTORS 88 = NOT APPLICABLE 99 = MISSING
BBDAGE	AGE OF BABY'S FATHER AT TIME OF BIRTH	AGE IN YEARS
RELDAD	SUBJECT'S RELATIONSHIP WITH BABY'S FATHER	1 = MARRIED AND LIVING TOGETHER 2 = MARRIED AND NOT LIVING TOGETHER 3 = LIVING TOGETHER AND NOT MARRIED 4 = NOT LIVING TOGETHER BUT HAVE OCCASIONAL CONTACTS 5 = DIVORCED 6 = WIDOWED 7 = NO RELATIONSHIP 8 = OTHER

VARIABLE NAME	VARIABLE DESCRIPTION	VALUE LABEL
CONDAD	SUBJECT'S EXTENT OF CONTACT WITH BABY'S FATHER	1 = SEE HIM EVERY DAY 2 = SEE HIM 2-3 TIMES A WEEK 3 = SEE HIM ONCE A WEEK 4 = SEE HIM RARELY 5 = NEVER SEE HIM
ESTEEM1 TO ESTEEM10	ROSENBERG'S SELF-ESTEEM SCALE QUESTIONS	1 = STRONGLY DISAGREE 2 = DISAGREE 3 = AGREE 4 = STRONGLY AGREE
FDQ1 TO FDQ25	FAMILY DYNAMIC QUESTIONNAIRE	1 = NEVER 2 = NOT VERY OFTEN 3 = OFTEN 4 = VERY OFTEN 5 = ALWAYS
WAIS	WESCHLER'S ADULT INTELLIGENCE SCALE-REVISED (VOCABULARY SUBSCALE ONLY)	0-80 POINTS

MOOS' FAMILY ENVIRONMENT SCALE SUBSCALES (CONVERSION SCORES)

COHESION	COHESION	CONVERSION SCORES CODED
EXPRESS	EXPRESSIVENESS	
CONFLICT	CONFLICT	
INDEPEND	INDEPENDENCE	
ACHIEVE	ACHIEVEMENT ORIENTATION	
INTELCUL	INTELLECTUAL-CULTURAL ORIENTATION	

VARIABLE NAME	VARIABLE DESCRIPTION	VALUE LABEL
MOOS FES SUBSCALES CONTINUED		
ACTIVREC	ACTIVE-RECREATIONAL ORIENTATION	CONVERSION SCORES CODED
MORALREL	MORAL-RELIGIOUS EMPHASIS	
ORGAN	ORGANIZATION	
CONTROL	CONTROL	
MOOSRAW	MOOS' FES SUBSCALES (RAW SCORES)	
OPEN-ENDED INTERVIEW QUESTIONS RESPONSE SCALES		
MOM	HOW TEEN AND MOM GET ALONG	1 = TERRIBLE 2 = NOT VERY WELL 3 = SOMETIMES/ SOMETIMES NOT 4 = USUALLY GOOD 5 = VERY WELL
FREQTALK	HOW FREQUENTLY MOM AND TEEN TALK/VISIT	1 = HARDLY EVER/1-2 TIMES PER MONTH 2 = A COUPLE TIMES PER MONTH 3 = ONCE A WEEK 4 = A COUPLE TIMES A WEEK 5 = EVERY DAY
INITIATE	WHO MAKES INITIATIVE TO TALK/VISIT	1 = MOTHER 2 = TEEN 3 = BOTH

VARIABLE NAME	VARIABLE DESCRIPTION	VALUE LABEL
WHATTALK	WHAT TEEN AND MOM TALK ABOUT	1 = NOTHING 2 = EVERY DAY THINGS 3 = PERSONAL THINGS
CHANGE	HOW RELATIONSHIP WITH MOM HAS CHANGED OVER PAST 2 YEARS	1 = MUCH WORSE 2 = GETTING WORSE 3 = NO CHANGE 4 = CLOSER 5 = A LOT CLOSER
FRIENDS	DOES TEEN HAVE SAME FRIENDS AS 2 YRS. AGO	1 = NO 2 = BEST FRIEND ONLY 3 = SOME 4 = MANY 5 = YES
FRKIDS	HOW MANY OF TEEN'S FRIENDS HAVE CHILDREN	1 = NONE 2 = SOME (1-2) 3 = SEVERAL (3-5) 4 = MOST (6-10)
INFLUENC	DID FRIENDS HAVE INFLUENCE ON TEEN BECOMING/NOT BECOMING PREGNANT	1 = NO 2 = MAYBE 3 = YES

APPENDIX D: QUE

BACKGROUND VARIABLES
(for parenting teens)

The questions in this section are about characteristics of you and your family. Place a check mark in the blank next to your answer or fill in the blank.

1. Your age at last birthday: _____

2. What is your year in high school or the grade you last attended?

_____ less than seventh grade
_____ junior high school (9th grade)
_____ partial high school (10th or 11th grade)
_____ high school graduate (private, preparatory, parochial, trade, or public school)
_____ partial college (at least one year) or specialized training
_____ standard college or university graduation
_____ graduate professional training (graduate degree)

3. What is/was your last cumulative grade point average in high school? _____

4. What is your marital status?

____ single
____ married
____ divorced
____ separated
____ widowed

5. What was your baby's father's age at the birth of your baby? _____

6. What is your relationship with the father of your baby?

_____ married & living together
_____ married & not living together (separated)
_____ living together and not married
_____ not living together but have occasional contacts
_____ divorced from him
_____ widowed
_____ no relationship
_____ other (please specify) _____

7. What is the extent of your contact with the father of your baby?

_____ see him every day
_____ see him 2 or 3 times a week
_____ see him once a week
_____ see him rarely (once or twice a month)
_____ never see him

8. Do you have a job now? _____ yes _____ no

If yes, how many hours per week do you work? _____

Where do you work? _____

What do you do at your job? _____

9. What are all the sources of your financial support?

_____ Your job
_____ Spouse's job
_____ Savings
_____ Loans
_____ Scholarships
_____ Money from parents
_____ Money from boyfriends
_____ Money from government agencies (such as ADC, Title 9 [Medicaid], food stamps, General Assistance)
_____ Other income _____
(specify)

10. I you are not living with your parents, what is your annual income? _____

11. What is your religious preference?

_____ Protestant
_____ Fundamental Protestant
_____ Catholic
_____ Jewish
_____ Other _____
(specify)

12. If you attend church/temple, what is the name of the church/temple you attend? _____

13. How often do you attend church/temple?

_____ 1 time per week
_____ 2 times per month
_____ 1 time per month
_____ almost never

14. Use the following scale to answer the next question.

1	2	3	4	5
almost never	not often	sometimes	usually	almost always

To what extent do you follow the church's/temple teachings in addition to attending?

_____
(put your response here)

15. What is the current marital status of your biological adopted mother?

_____ single
_____ divorced
_____ married
_____ remarried
_____ separated
_____ deceased
_____ widowed
_____ other

16. What is the current marital status of your biological or adopted father?

____ single
____ divorced
____ married
____ remarried
____ separated
____ deceased
____ widowed
____ other

17. Check the highest level of education completed by...

Your Father	Your Mother	
_____	_____	Grade school
_____	_____	Junior high school
_____	_____	Some high school
_____	_____	High school graduate
_____	_____	Some college or technical school
_____	_____	College graduate
_____	_____	Graduate or professional degree

18. Your mother's job title or occupation:

_____

19. Your father's job title or occupation:

_____

BACKGROUND VARIABLES
(for friends)

The questions in this section are about characteristics of you and your family. Place a check mark in the blank next to your answer or fill in the blank.

1. Your age at last birthday: _____

2. What is your year in high school or the grade you last attended?

_____ less than seventh grade
_____ junior high school (9th grade)
_____ partial high school (10th or 11th grade)
_____ high school graduate (private, preparatory, parochial, trade, or public school)
_____ partial college (at least one year) or specialized training
_____ standard college or university graduation
_____ graduate professional training (graduate degree)

3. What is/was your last cumulative grade point average in high school? _____

4. What is your marital status?

____ single
____ married
____ divorced
____ separated
____ widowed

5. What is your race or ethnic background?

____ white
____ black
____ oriental
____ hispanic
____ native American
____ other (please state): _____

6. Do you have a job now? _____ yes _____ no

   If yes, how many hours per week do you work? _____

   Where do you work? _____

   What do you do at your job? _____

7. What are all the sources of your financial support?

   _____ Your job
   _____ Spouse's job
   _____ Savings
   _____ Loans
   _____ Scholarships
   _____ Money from parents
   _____ Money from boyfriends
   _____ Money from government agencies (such as ADC, Title 9 [Medicaid], food stamps, General Assistance)
   _____ Other income _____
   (specify)

8. I you are not living with your parents, what is your annual income? _____

9. What is your religious preference?

   _____ Protestant
   _____ Fundamental Protestant
   _____ Catholic
   _____ Jewish
   _____ Other _____
   (specify)

10. If you attend church/temple, what is the name of the church/temple you attend? _____

11. How often do you attend church/temple?

   _____ 1 time per week
   _____ 2 times per month
   _____ 1 time per month
   _____ almost never

12. Use the following scale to answer the next question.

1	2	3	4	5
almost never	not often	sometimes	usually	almost always

To what extent do you follow the church's/temple teachings in addition to attending?

_____
(put your response here)

13. How old was your mother when she had her first baby?
_____ years

14. What is the current marital status of your biological or adopted mother?

_____ single
_____ divorced
_____ married
_____ remarried
_____ separated
_____ deceased
_____ widowed
_____ other

15. What is the current marital status of your biological or adopted father?

_____ single
_____ divorced
_____ married
_____ remarried
_____ separated
_____ deceased
_____ widowed
_____ other

16. Check the highest level of education completed by...

Your Father	Your Mother	
_____	_____	Grade school
_____	_____	Junior high school
_____	_____	Some high school
_____	_____	High school graduate
_____	_____	Some college or technical school
_____	_____	College graduate
_____	_____	Graduate or professional degree

17. Your mother's job title or occupation:

_____

18. Your father's job title or occupation:

_____

SELF-ESTEEM SCALE

Please indicate the degree to which you agree or disagree with each of the following statements by choosing one of the answers listed below.

1. Strongly disagree
2. Disagree
3. Agree
4. Strongly agree

____ 1. On the whole, I am satisfied with myself.

____ 2. At times I think I am no good at all.

____ 3. I feel that I have a number of good qualities.

____ 4. I am able to do things as well as most other people.

____ 5. I feel I do not have much to be proud of.

____ 6. I certainly feel useless at times.

____ 7. I feel that I am a person of worth, at least on an equal plane with others.

____ 8. I wish I could have more respect for myself.

____ 9. All in all, I am inclined to feel that I am a failure.

____ 10. I take a positive attitude toward myself.

From Rosenberg, J. (1965)

WAIS-R VOCABULARY

Directions. Place the word list before the subject and say I want you to tell me the meanings of some words. **Let us start with _____; what does _____ mean?** When pronouncing the word, point to the appropriate word on the card. Use this same method of presentation for all words. **Write down the subject's exact response to every word.**

Start with word 4 (winter), unless the subject appears to be much below average in verbal ability, in which case, start with the first word (bed). If a zero credit response is given for <u>any</u> of the words 4-8, immediately administer words 1, 2, and 3, and score them. Then proceed with the test until the criterion for discontinuance is met. For example, if a zero response is given to word 7 (fabric), the examiner would administer words 1, 2, and 3, then continue with words 8, 9, etc., until 5 consecutive words are failed.

With more intelligent subjects, the formal question and the pointing may be omitted after the third or fourth word; just be sure the word is said clearly and that standard pronunciation is used. Also ascertain that the subject has located the word on the list.

Occasionally it is difficult to determine whether a subject does or does not know the meaning of a word. In such instances, the examiner may say **Tell me more about it** or **Explain more fully** or make some other equally neutral statement.

DISCONTINUE After 5 consecutive failures (responses scored 0). When words 1, 2, and 3 are given, discontinue when any 5 consecutively numbered items have been failed.

SCORING Each of items 1-3 is scored 2 or 0; each of the remaining items is scored 2, 1, or 0. Credit 6 points for subjects to whom words 1-3 are not administered. See pp. 63-75 for most common meanings, specific scoring criteria, and sample answers.

Maximum score: 80

FAMILY DYNAMICS QUESTIONNAIRE
Hockaday and Reed

We would like to find out more about you and your family while you were still living at home. For each question please look at the rating scale to decide which number best fits your situation. For example, when answering question number one, if you decide that you or someone in your family <u>always</u> had special times or occasions that they spent with other family members, then you would fill in the number 5 on the blank beside question number one. You may use any number on the scale. Remember all responses are confidential. Please answer all questions honestly.

NEVER	NOT VERY OFTEN	OFTEN	VERY OFTEN	ALWAYS
1	2	3	4	5

TO WHAT EXTENT DID ANYONE IN YOUR FAMILY...

____ 1. Have special times or occasions that they spent with other family members?

____ 2. Participate in activities together such as picnicking, hiking, boating, camping, bike riding, fishing, watching movies, or doing yard work?

____ 3. Take vacations together?

____ 4. Hit, push, throw objects, or threaten others in a rough manner?

____ 5. Help you with your homework?

____ 6. Take more than the prescribed amount of prescription drugs?

____ 7. Work a part time or full time job while attending high school?

____ 8. Drink to the extent that it caused them to say or do things they normally wouldn't say or do, such as throw objects, hit others, curse or yell at others?

NEVER	NOT VERY OFTEN	OFTEN	VERY OFTEN	ALWAYS
1	2	3	4	5

TO WHAT EXTENT DID ANYONE IN YOUR FAMILY...

____ 9. Participate in extracurricular activities such as band, orchestra, singing in the choir, cheerleading, or playing sports?

____ 10. Attend your or your brothers' or sisters' school functions together?

____ 11. Get arrested or spend anytime in jail?

____ 12. Read books or magazines in leisure time?

____ 13. Have chores to do around the house or yard while living at home?

____ 14. Get yelled at in anger by your parents?

____ 15. Use marijuana, crack, cocaine, LSD, or other illegal drugs?

____ 16. Spend alot of time alone without an adult around after school or in the evenings?

____ 17. Make sexual advances that made them/you feel uncomfortable, such as advances made from brother to sister, father to daughter, mother to son, step-father to step-daughter, step-mother to step-son, cousin to cousin, uncle to niece, or aunt to nephew?

____ 18. Go without necessary things such as food or clothing because there wasn't enough money?

____ 19. Have a close relationship with your grandparents (e.g. write letters, call or visit)?

____ 20. Spend time with friends from school, work, or the neighborhood?

NEVER	NOT VERY OFTEN	OFTEN	VERY OFTEN	ALWAYS
1	2	3	4	5

TO WHAT EXTENT DID YOUR PARENT OR PARENTS...

____ 21. Use inconsistent discipline with you or your brothers or sisters (i.e. did you know if you were going to be punished for your behavior or not)?

____ 22. Have friends that they spent time with?

____ 23. Argue with each other?

____ 24. Belong to clubs or groups from your school, neighborhood, or community?

____ 25. Make important family decisions alone without the help of your other parent?

Family Environment Scale
Rudolf Moos

COHESION SUBSCALE

1. Family members really help and support one another.
11. We often seem to be killing time at home.
21. We put a lot of energy into what we do at home.
31. There is a feeling of togetherness in our family.
41. We rarely volunteer when something has to be done at home
51. Family members really back each other up.
61. There is very little group spirit in our family.
71. We really get along well with each other.
81. There is plenty of time and attention for everyone in our family.

EXPRESSIVENESS SUBSCALE

2. Family members often keep their feelings to themselves.
12. We say anything we want to around home.
22. It's hard to "blow off steam" at home without upsetting somebody.
32. We tell each other about our personal problems.
42. If we feel like doing something on the spur of the moment we often just pick up and go.
52. Someone usually gets upset if you complain in our family.
62. Money and paying bills is openly talked about in our family.
72. We are usually careful about what we say to each other.
82. There are a lot of spontaneous discussions in our family.

CONFLICT SUBSCALE

3. We fight a lot in our family.

13. Family members rarely become openly angry.

23. Family members sometimes get so angry they throw things.

33. Family members hardly ever lose their tempers.

43. Family members often criticize each other.

53. Family members sometimes hit each other.

63. If there's a disagreement in our family, we try hard to smooth things over and keep the peace.

73. Family members often try to one-up or out-do each other.

83. In our family, we believe you don't ever get anywhere by raising your voice.

INDEPENDENCE SUBSCALE

4. We don't do things on our own very often in our family.

14. In our family, we are strongly encouraged to be independent.

24. We think things out for ourselves in our family.

34. We come and go as we want to in our family.

44. There is very little privacy in our family.

54. Family members almost always rely on themselves when a problem comes up.

64. Family members strongly encourage each other to stand up for their rights.

74. It's hard to be by yourself without hurting someone's feelings in our household.

84. We are not really encouraged to speak up for ourselves in our family.

ACHIEVEMENT ORIENTATION SUBSCALE

5. We feel it is important to be the best at whatever you do.

15. Getting ahead in life is very important in our family.

25. How much money a person makes is not very important to us.

35. We believe in competition and "may the best man win."

45. We always strive to do thins hust a little better the next time.

55. Family members rarely worry about job promotions, school grades, etc.

65. In our family, we don't try that hard to succeed.

75. "Work before play" is the rule in our family.

85. Family members are often compared with others as to how well they are doing at work or school.

INTELLECTUAL-CULTURAL ORIENTATION SUBSCALE

6. We often talk about political and social problems.

16. We rarely go to lectures, plays or concerts.

26. Learning about new and different things is very important in our family.

36. We are not that interested in cultural activities.

46. We rarely have intellectual discussions.

56. Someone in our family plays a musical instrument.

66. Family members often go to the library.

76. Watching T.V. is more important than reading in our family.

86. Family members really like music, art and literature.

ACHIEVEMENT-RECREATIONAL ORIENTATION SUBSCALE

7. We spend most weekends and evenings at home.

17. Friends often come over for dinner or to visit.

27. Nobody in our family is active in sports, Little League, bowling, etc.

37. We often go to movies, sports events, camping, etc.

47. Everyone in our family has a hobby or two.

57. Family members are not very involved in recreational activities outside work or school.

67. Family members sometimes attend courses or take lessons for some hobby or interest (outside of school).

77. Family members go out a lot.

87. Our main form of entertainment is watching T.V. or listening to the radio.

MORAL-RELIGIOUS EMPHASIS SUBSCALE

8. Family members attend church, synagogue, or Sunday School fairly often.

18. We don't say proyers in our family.

28. We often talk about the religious meaning of Christmas, Passover, or other holidays.

38. We don't believe in heaven or hell.

48. Family members have strict ideas about what is right and wrong.

58. We believe there are some things you just have to take on faith.

68. In our family each person has different ideas about what is right and wrong.

78. The Bible is a very important book in our home.

88. Family members believe that if you sin you will be punished.

ORGANIZATION SUBSCALE

9. Activities in our family are pretty carefully planned.

19. We are generally very neat and orderly.

29. It's often hard to find things when you need them in our household.

39. Being on time is very important in our family.

49. People change their minds often in our family.

59. Family members make sure their rooms are neat.

69. Each person's duties are clearly defined in our family.

79. Money is not handled very carefully in our family.

89. Dishes are usually done immediately after eating.

CONTROL SUBSCALE

10. Family members are rarely ordered around.

20. There are very few rules to follow in our family.

30. There is one family member who makes most of the decisions.

40. There are set ways of doing things at home.

50. There is a strong emphasis on following rules in our family.

60. Everyone has an equal say in family decisions.

70. We can do whatever we want to in our family.

80. Rules are pretty inflexible in our household.

90. You can't get away with much in our family.

OPEN-ENDED QUESTIONNAIRE (NONPARENTING VERSION)
(bolded questions were analyzed)
Crase, Stockdale, Hockaday, Reed (1990)

Directions: Please ask every question listed below. The idented questions are probes. Every probe needs to be asked if it was not answered in the teen's response to the original question. If there are a series of questions which are not idented, these are not probes and you need to make sure that each question has an answer to it. Thank you!

1. Was yesterday a typical day in your household? If not, find a recent day which was fairly typical. Tell me everything that took place yesterday in your household from the time you awoke until the time you went to bed.

2. What do you in the evening?
   What forms of relaxation do you have in the evening?
   What kinds of chores remain to be done at this time?

3. How do you and your mother get along?
   How frequently do you talk/visit with your mother (everyday, once a week, etc.)?
   Who usually makes the initiative?
   What kinds of things do you talk about with her?

4. Do you feel that your relationship with your mother has changed over the past two years?
   Has your pattern of visiting and talking with your mother changed over the past two years?
   Do you think you have become more or less close to each other over the past two years?

5. As you look back over the years, and your own childhood, how would you compare the ways in which you will raise your children with the ways in which your mother raised you?
   What will be similar?
   What will be different?
   If you will do things differently, why do you think you will do things differently from your mother?

6. Tell me a little about your friends, who they are, and the kinds of activities you do with them. Do you have the same friends as you had two years ago? Do any of your friends have children? Do you think your friends had any influence on you not getting pregnant?

7. Did you ever want to get pregnant as a teenager? If yes, why? If no, do you use birth control? What type of birth control do you use? Do you use it every time?

8. What makes you feel good about your present situation (not being a young parent)? Does anything make you feel bad about your present situation? If so, what?

9. Are there any parts of the interview which concern you or that you want to talk about? Are there any questions that you would like answered? Remember, every response you have made is confidential!

OPEN-ENDED QUESTIONNAIRE (PARENTING VERSION)
(bolded questions were analyzed)
Crase, Stockdale, Hockaday, Reed (1990)

Directions: Please ask every question listed below. The idented questions are probes. Every probe needs to be asked if it was not answered in the teen's response to the original question. If there are a series of questions which are not idented, these are not probes and you need to make sure that each question has an answer to it. Thank you!

1. Was yesterday a typical day in your household? If not, find a recent day which was fairly typical. Tell me everything that took place yesterday in your household from the time you awoke until the time you went to bed.

2. What do you in the evening when the child/children are in bed?
   - What forms of relaxation do you have in the evening?
   - What kinds of chores remain to be done at this time?

3. What arrangements do you make for the child/children when you go out with friends?
   - Who babysits?

4. How do/does the children/child react when you go out with friends?
   - What happens when the child/children fuss and cry when left with the babysitter?
   - Do you cancel your plans rather than go out?
   - Do you call in during the evening?
   - Do you worry about the child/children at such times?
   - Do you feel guilty about going out and leaving the child/children with a babysitter?

5. How do you and your mother get along?
   - **How frequently do you talk/visit with your mother (everyday, once a week, etc.)?**
   - **Who usually makes the initiative?**
   - **What kinds of things do you talk about with her?**

6. **Do you feel that your relationship with your mother has changed since you became pregnant?**
   Has your pattern of visiting and talking with your mother changed since you became pregnant? Do you think you have become more or less close to each other as you have grown and had children of your own?

7. **As you look back over the years, and your own childhood, how would you compare the ways in which you are raising your children with the ways in which your mother raised you?**
   What specifice similarities do you see?
   What differences do you see?
   If you do things differently, why do you think you do things differently from your mother?

8. Tell me a little about your friends, who they are, and the kinds of activities you do with them. **Do you have the same friends as you had before you became pregnant? Did any of your friends have children? Do you think your friends had any influence on you getting pregnant?**

9. **Did you want to get pregnant? If yes, why? If no, were you using birth control? What type of birth control did you use? Did you use it every time?**

10. **What makes you feel good about your present situation? What makes you feel bad about your situation?**

11. Are there any parts of the interview which concern you or that you want to talk about? Are there any questions that you would like answered? Remember, every response you have made is confidential!

GENERAL SUMMARY AND IMPLICATIONS

General Summary

This study examined differences in the family environments of parenting teens (N = 56) and nominated friends who were nonpregnant/nonparenting (N = 27). Self esteem and verbal ability also were examined for the two groups.

Subjects completed written questionnaires concerning background characteristics, self esteem, and their family environment. Additionally, their verbal ability was assessed using a standardized instrument; open-ended interview questions were used to gather in-depth data about relationships with mothers and friends, birth control usage, and childrearing beliefs.

Frequencies and t-tests were used to examine the differences between parenting teens and friends. Correlational analyses were computed for all variables. Regression analyses also were used to assess characteristics that predict teen pregnancy.

Responses to the open-ended questions were analyzed by three judges; categories, representing a theme, were developed and responses to each question were placed in the appropriate category. Frequencies were computed for each category and t-tests were used to examine the differences between parenting teens and friends on the categories.

For the present study, it was predicted that parenting teens and nonpregnant/nonparenting friends would be different in family environments, background characteristics, self esteem, and verbal ability. Results showed that friends were significantly older, had a higher grade point average, and received financial aid from more sources than did teen mothers. Furthermore, friends were significantly more often single, in college or a vocational school, attending church on a regular basis, and raised in intact families. Teen mothers had significantly higher self esteem scores than did friends. Additional significant differences were found in two family environment dimensions; friends were significantly higher than parenting teens on Active-Recreational Orientation and Togetherness in the family.

A regression analysis revealed several family and background variables that significantly predicted teen pregnancy: lower levels of family Cohesion, higher self esteem, lower educational levels achieved by teens, and having a mother who was younger at the birth of her first baby.

Analyses of open-ended responses regarding the teens' lives two years ago showed that the nonpregnant/nonparenting friends had friendships of long duration (i.e., two years or more) and were significantly more apt to have close friends who had been pregnant. Furthermore, friends stated that they were influenced by their friends not to get pregnant. Friends

entertain wishes of becoming a teen mother significantly less often than did the teen mothers; parenting teens stated that they had wishes of becoming a young parent before they actually became pregnant. Friends stated that they did use birth control at the present time; however, friends did not use it any more consistently than parenting teens. Also, there were no differences in the method of birth control used.

Additional analyses revealed that parenting teens and friends wish to raise their children either noticeably similar or different than they were raised in several aspects. Family milieu, discipline, childrearing values, parental control, affect/emotional involvement, religion, material resources, expectations, and interaction patterns were areas mentioned. Examination of teens' perceptions of the positive and negative aspects of their situation (i.e., being a young parent or not) indicated that motherhood, autonomy, education, living situation, social support, partner relationship, psychosocial, parent/child relationship, financial, and work commitment were aspects teens either felt good or bad about.

From these results it can be concluded that, although there are definite differences between parenting and nonpregnant/nonparenting teens, these differences are not concentrated in the teens' family environment. Several family environment dimensions and background variables did predict teen pregnancy.

Implications

A number of recommendations for future research can be made as a result of the present study. First, more research is needed to compare pregnant/parenting teens with control groups. Research using large samples (i.e., $N > 30$) and the gathering of both qualitative and quantitative information is needed. This study made an attempt to correct these limitations. Secondly, racially diverse samples are needed when studying the antecedents and consequences of teen parenting; whereas the present study's racial ratios were representative of the region in which the study was conducted, they were not representative of teens in general. Additionally, family environment questionnaires with proven reliability and validity that assess levels of abuse in the family of origin need to developed. Even though the present study used the Moos, a reliable and valid source of family characteristics, this instrument did not assess any type of abuse that might have occurred in the family. Thus, the Family Dynamics Questionnaire (Hockaday & Reed, 1990) was developed. Preliminary analyses on the reliability of the individual items and factors and correlations between the FDQ factors and the FES subscales show promising results for further development and use.

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